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ABSTRACT

In addition to the special addresses, the proceedings contain speeches on (1) research, (2) international relations, (3) intercollegiate athletics, (4) the history of sport, (5) teacher education, (6) basic instruction, and (7) intramural athletics. In the area of research, papers on philosophical, experimental, sociological, and historical research and research theory, and teaching research are presented. Also presented in the proceedings are the president's report, financial reports, minutes from the last meeting, and reports from the standing committees, the president's committees, and the joint committee. Lists of NCPEAM members, committee members, and officers are included, along with the NCPEAM constitution and by-laws, and a statement on NCPEAM policies. (PCB)

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Annual Meeting
December 27-30, 1970
Portland, Oregon

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NEXT MEETING

January 10-12, 1972
New Orleans, Louisiana

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NOTES FOR THE 75TH ANNUAL CONVENTION

Convention City	New Orleans, Louisiana
Convention Hotel	Sheraton-Charles Hotel
Convention Dates	January 10-12, 1972
Convention Manager	Harvey Jessup

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Expanding the Role of Physical Education

Chalmer G. Hixson
The Ohio State University

The selection of a topic for these remarks, a traditional responsibility of this office, became a source of frustration for me. At one time or another, three topics were considered. First, modern media in physical education, everyone knows I'm an expert in this area; second, the professional preparation and certification of the coach in interscholastic sports, I've been leading a crusade in this area for 16 years and we still have no program of certification in my own state of Ohio; and third, the use of television in physical education, a natural with my personality, voice, and profile. These are areas of special interest to me and each was selected at one time or another. A rough draft for each was prepared and then abandoned in dissatisfaction. These were important areas of concern, but my predecessors had been so profound; and, I wanted my remarks to carry a message which, at least from my point of view, was vital. Finally, in rereading some correspondence in preparation for the Executive Council and business meetings, I came upon the suggestion our President Elect, Deane Richardson, had made in jest; and, the idea for my remarks fell into place. He had said, "Why not write the presidential address about teaching in a university with no students?" Now I knew why I had been so dissatisfied with the other topics. The most vital concern in higher education today and the one really at my "gut-level" stems from the student protest and riots of this past year. Television, media, new combinations of subject matter, all pale into insignificance when one's entire way of life is threatened, for our, my university, is a changed institution and the end of the changes is not in sight. So, my friends, if you dislike the remainder of these remarks, give the credit to Deane. If you do enjoy them, I'll accept the credit. Additionally, don't be too disappointed that you won't get to hear the speeches I discarded. Opportunities to publish them became available; and, with the assistance of some of my friends and critics, among them Lawrence F. Locke, associate editor of Quest, they were polished up and will appear in the literature to "thrill" you in the near future.

While I was vaguely aware of the problems on the college and university campuses in this country, I really wasn't prepared for the events on my own campus of May, 1970. The student riots and violence shook my world of "ivy covered towers" to its very foundations. As a member of our faculty Green Ribbon Commission, I was close at hand to see windows smashed, buildings vandalized and defaced, students injured, police injured, students preventing other students access to the libraries and classrooms, stores and business establishments looted, a helicopter shine a powerful spotlight through the night to expose a sniper on the rooftop, firefighters extinguish the arsonist's incendiary fires, and student and faculty speakers move 12,000, plus or minus, students to the brink of a mob disaster. I smelled the tear gas and heard the curses and vilifications as the law of the jungle replaced sanity and reason. And, a great university was closed! The faculty found itself helpless and frightened; and, as one member of it, my world and all it represented, seemed torn asunder.

With the University closed only essential personnel were granted admission to the campus. After all, animals need to be fed, hospital patients cared for, and security watches maintained in facilities. No students, no faculty, no classes—these were the order of the day. A physical education facility is a strange place indeed without the thump of basketballs, the smack of handballs, and the splashes of the swimmers; in fact, it's downright eerie. Wall-to-wall meetings in off-campus facilities such as churches and recreation centers, assignments to fire watches and security patrols of the buildings, filled the professorial days and nights. A fire watch in a silent, darkened physical education building provides a time for introspection and meditation. What had happened to respect for law and order? Respect for the rights of others? Decency in speech? Why had it become unsafe to walk across campus at night? Robbery, rape, murder, drug abuse and communal living under conditions unfit for human habitation had become commonplace, in fact identified with the university district. Why? What had spawned such conditions, such conduct? Had we in this very building done or failed to do something which contributed to such conditions in this university community? Could we in physical education really have done anything to help prevent these riots? Were we against change and new directions? Didn't we, along with the University, really stand for orderly change? Had we in our teaching been relevant to the issues of the day; for example, had we faced the racial issue in our sports and games and our professional preparation curricula; and, if we had, did our teachings carry over into those areas of living which are beyond the play fields and courts into the Oval and on to High Street?

Students, in addition to radicals, extremists and activists, had participated in these riots to lash out at the dehumanizing effect of the large university where the senior faculty seldom teach lower-level courses and are seemingly interested in subject matter, research, and graduate study—not students. Some of those students were ours. In fact, most of them had been touched by physical education in some way and it occured to me that we too in physical education had "tossed away the baby and retained the bath water." We have become so involved with movement, we forget the mover. With games and scores, we forget the players. With scientific backgrounds, Kreb cycles, neuropsychological learning models—yes, and modern media, that we tend to forget our only reason for existence is the emerging personality of the boy, the girl, the woman, the man, our student.

We had taught these students to throw, that's a skill certainly, but we hadn't taught them to throw rocks and tear gas cannisters at police, or plateglass windows. After all, in the big picture of life and living the skill of throwing is of small value as compared to those knowledges, understandings, appreciations and behaviors which would have helped to prevent the violence in which the skill of throwing had been utilized so very well. In the totality of the physical education experience, had there been opportunities, teachable moments, which we might have exploited to this end?

My purpose is to call your attention to this possibility and urge you to re-examine the emphases and purposes of physical education. To do so, I want to discuss just one of the many possibilities for such learnings by presenting a series of slides, some serious, some nonsensical, relating to the official and officiating in sports; for, I feel there is one such cluster of learnings involved in this phase of physical education which, though often neglected, is far more important than endurance, strength, or skill.

Our lives are saturated with authority figures, rules, regulations and laws. What better place to learn to understand the role of law and order and how to live with them than in the laboratory of sports, athletics, and physical education. Do we exploit the opportunities for such learnings, or do we overlook them in our anxiety to get on with the development of skill, score, and reduced heart rates?

During the riots on campus, I was disturbed by the feeling that I had been there before; and, it wasn't long until I began to relate it to my years of officiating in school and college athletics. Oh, I hadn't suffered the vilification of "Pig" and "Fuzz"; but, somehow "Homer" and "Blind Robber" which I had heard had been accompanied by the same raw, violent emotion and hateful expressions of face and voice. Does throwing cans, pennies, gravel, snowballs, and seat cushions differ so much from throwing rocks? Did the hecklers who refused to allow the "other side" to be heard from the sound truck on the Oval differ so very much from the booing spectators who interfere with the snap signals of the other side or while the free thrower stands at the free throw line? They seem similar to me and, God forbid, could it be that we helped teach or at best reinforce the deplorable attitudes and conduct so evident in the riots?

Around the inter-personal relationships between officials and players in our games and contests cluster a series of learning so important to society that I am awed by the responsibility we share with the sports official, a member of the instructional team. What is a young man, a student, taught and what does he learn as he "tells off" the umpire? After all, these are educational experiences which we have organized and sponsored. Will our student transfer the understandings, the attitudes he has learned to other areas of living? For example, will it lead him to "telling off" the vice president of a great university and confrontation with other duly constituted authorities in his life, including the National Guard? There is a disquieting similarity running through these situations, isn't there?

Sports officials and their decisions would often try the patience of Job, let alone that of an ordinary man. How can anyone just sit back and accept them? Some officials seem to dominate the game and take the play away from the teams with constant whistle tooting and by calling back seemingly every play. Teams and players have to adjust somehow to the officiating. Many of you have experienced decisions by officials which seemed to cost the game and some of us would retaliate or strike back at the official for having called the foul. Whether it was a valid decision is often forgotten in the highly emotionalized atmosphere of our contests. Blind, unquestioning acceptance of an official's decisions is not advocated here. Violent retaliation, intimidation, and taking the law into one's own hands are not the way either. We must learn to protest in legally established ways, to accept the consequences of our acts, and to understand the essential role of rules and officials in the conduct of our contests and hopefully, transfer similar learnings to the roles of law and order and duly constituted authorities in our daily lives.

What does a coach's display of protest and anger at the official's decision teach? What do his players and the spectators learn about the roles of authority and laws in basketball and perhaps later transferred to living on campus Of course, the rules provide for the game officials to enforce the desired behavior on the part of the coach; but that doesn't really seem consistent with the responsibilities accepted by a leader, a teacher of youth, a coach.

What does a cheerleader learn; and, what do those she leads learn, as she joins with the coach in a violent display of protest and anger at the decision of an official at a contest? If she protests in this manner at a game, what will her behavior be in the real game of living? Did those students who led the shouting, the vilifications, the vocal protests (the cheers) in the riots learn those attitudes, knowledges, understandings, yes, and even the skills, by being cheerleaders or being led in cheers by others during their elementary, junior and senior high school laboratories of sportsmanship which we so earnestly provided?

What does the proud father teach his young son at the baseball game; and, what does the young son learn as his father protests in anger the decision of an umpire, an authority figure? Will that son display similar behavior in protest at one of his own father's decisions; after all, his father is an authority figure in his life.

Well what do we do about all of this? Punish the students who display the wrong behavior? Psychoanalyze the motivations of the students? The National Guard was called to control the campus riots. None of these seem satisfactory.

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The students, players-spectators, and the adults in our bleachers as well, need to understand that duly constituted authority is not the "ENEMY"; and it could be promoted by teaching them to understand and appreciate the official and his job in sports. This is the cluster of learnings I deem so important.

We need to exploit and if they are not readily available, create teachable moments for exploitation to reach our goal. For example, no incident of unacceptable behavior by students, players, spectators, or others should ever be overlooked, ignored, or passed over lightly to get on with the development of skill or the winning of a contest. For in doing so, the undesirable behavior is reinforced by condonement. Experience in and study of officiating should be part and parcel of physical activity courses such as our general education programs provided for all students. Our future teachers and coaches need to be prepared to teach for these learnings as well as to develop skills and endurance. Schools and colleges should take overt action by demanding and enforcing exemplary conduct by coaches and acceptable behavior by spectators. Professional sports should be urged to meet their social obligations by requiring players to display good sportsmanship and accept officials' decisions rather than exhibit immature conduct and poor sportsmanship so frequently viewed by vast television audiences. Professional athletes represent the epitome of achievement and they are admired and respected by the general public. In addition, they serve as the idols and ideals for vast numbers of youth. If these men can sell shaving cream, hair dressing, gasoline and cars in the brief commercials developed by Madison Avenue, they can sell attitudes, understandings, appreciations, and behaviors in the real live action of the games and contests.

If, as I have contended, we neglect this cluster of learnings, are we doing likewise with racism, democratic living, and other "associated" clusters? I believe we need to direct our energies and attention to the student, the mover, rather than the motion or the movement. Most of all, gentlemen, I hope you will apply your creative talents to helping produce vast numbers of graduates of our schools and colleges who will create and conduct a society in which individual rights will be granted and protected, it will be safe for a woman to walk across the campus to the library; and, in which my-our-university will remain open and free!

(Note: A series of forty slides illustrated parts of this presentation.)

Student Power U.S.A.

Glenn W. Arnett
San Fernando Valley State College

What Is This "Thing" Called "Student" Power?

This question raises several counter-questions that may be partial answers. For example:

1) Is it an awakening of youth?
2) Is it a result of inadequate or little guidance on the part of adults?
3) Is it a consequence of the impact of our present educational system?
4) Is it a natural rebellion against adult authority?
5) Is it a sign of maturation of youth?
6) Is it a deep concern of students for the survival of mankind?
7) Is it a product of international intrigue?
8) Is it the thing to do—exuberance of youth (let's get on the band wagon)?
9) Is it a response to the political influence of the college or university?
10) Is it a valid rallying-point from which students can use their influence?
11) Is it merely a spur of the moment thing, emotionally-oriented?

What are the causes of student dissent, militancy and violence?

Research, observation and study reveal a multitude, or combination of causes, all related to chaotic conditions on many college campuses. It has been said, "whatever the students' behavior, they were not born that way. Rather, they got that way from the environment in which they live." I shall attempt to develop this subject of student power by following five topics:

I. THE STUDENT
II. THE ENVIRONMENT OF HIGHER EDUCATION
III. THE INGREDIENTS OF STUDENT POWER
IV. THE CATALYSTS WHICH ENERGIZE THE INGREDIENTS INTO FORCES
V. THE RESPONSIBILITIES OF THE PROFESSION

Regarding the First Topic Related to "Student Power"

I. The Student—What makes him feel, think, act, or behave as he does?

Students can no longer be taken for granted. Whether or not a great majority of students remain largely contented, conservative and apathetic, does not matter. A determined minority of restless college students have forced the university to examine and sometimes change policies, rules, and values once considered sacred.

Many *assumptions* have been made regarding the causes of student unrest. I have categorized these into three large groups.

The *first* large group is composed of three claims which are critical of student activism. These seek causes in those factors they believe reflect a moral weakness in youth. The most frequently mentioned claim of the critics is: too must permissiveness in rearing children, in both the home and the school. The critics agree that some parents have, through painstaking efforts to avoid neuroses in their children, abdicated their responsibility to discipline and to teach their children. In so doing, they have reared a generation of spoiled, greedy youngsters who are unable to tolerate the slightest frustration without showing an angry or infantile response, resulting in temper tantrums in children and violent behavior in young adults. Demand for immediate answers and action by students could conceivably be the result of our educational system.

For example, my first ten years in California were spent in the public schools 1947-57. Many of the present college students are a product of those earlier years of public education. The children were taught in a permissive atmosphere, encouraged to be inquisitive, use critical thinking and become involved. The cluster and group process became *the thing*. The only question that was considered unreasonable was the question that was not asked. Perhaps our job of that day was well done.

The *second* claim of the critics of youth is that they are not responsible. Some experts in the field of student behavior believe that our culture is psychologized to the extent that youth has become unwilling to assume responsibility for their own behavior. These experts believe that when a behavior is totally explained there is a tendency for people to act as though they are no longer responsible for their behavior. They also believe that if laws are broken by youth in order to realize their own personal needs to solve their problems, they should not be held accountable for the consequences of their actions. Added confidence in this way of reasoning is gained by present students because of the attitudes of many faculty members and some practitioners in our judicial system. A great many examples of this desire for non-accountability have occurred. May I cite one example, the November 4 incident at Valley State College is a case in point.

On November 4, 1968—45 black student union members took over the physical education administrative offices. They held a number of administrators, faculty and staff as hostages. Threats on life, demands and intimidations of varying degrees were made. Demands were not met. Three members of the physical education department and the educational opportunity program director were forcibly marched across campus in close formation to the fifth floor of the administration building. Thirty other college personnel were being held in conference rooms on the fifth floor as hostages. Twelve demands were made of the acting-president—under duress, he conceded. Charges were filed against twenty-one of the participants involved in the take-over. The grand jury indicted twenty-one. A three month court trial followed in which nineteen of the twenty-one were convicted. Convictions ranged from misdemeanors to kidnapping. Sentencing ranged from short probationary periods to 1-25 years in the state penitentiary. Three months after conviction the three leaders were out on probation . . .

The *third* claim of the critics of student unrest is based on the alleged hazards of growing up in an affluent society. A child, according to these critics, raised in an affluent society has difficulty in finding useful goals. He has not been required to work and sacrifice for worldly goods or services. Therefore, the student is continually searching for new diversions and freedoms which sooner or later appear to be ungratifying to him. It frequently appears that the student has a guilt feeling over having it so good. Their restlessness appears to be a symptom of this dilemma. In a relatively poor society the very need for survival creates a structured and seemingly purposeful life. Thus, the student has little or no time for experimentation or searching for thrills.

The next large group includes five assumptions which regard the student in a favorable light. The *first* of these claims focuses on the cold war. Students have been reared in an era when the world is divided roughly into two large camps. They are competing with each other ideologically and politically. Since the Russians launched their first satellite the competition has been primarily educational. It is generally agreed that today's American high school graduates are better educated than any previous generation.

The *second* favorable claim focuses on the war in Viet Nam. Although student unrest began long before this war, there is little doubt that it remains a major factor influencing student behavior.

The *third* claim favorable to the student is presented by those who believe that student unrest is an appropriate response to the deterioration of the quality of life in America. Factors related to this deterioration include the moral deterioration of the family, over population, traffic jams, pollution of the environment, mass production and big business. (The establishment)

The *fourth* claim favorable to the student arises from political hopelessness. Many individuals see our society as one satisfied with status quo. Our complex society with its system of checks and balances, and the interplay of self-equalizing pressure groups, make effective change no longer possible within reasonable time limits. Ever-increasing numbers of radical students are convinced that the forces of government, industry and education are totally interdependent and allied to one another for the purpose of preventing any reasonable attempt to change the society. Many students also are convinced that constructive change is not possible by working through "the system," in order to change status quo. These students do not reject illegal acts or even violence as a manner of bringing about change. Unfortunately, it is admitted that these students have no constructive ideas or vision regarding a replacement of that which they desire to destroy, or alternative ways for society to go. Unfortunately, they also seem determined to destroy the one institution, the one avenue through which they could achieve their purpose, the educational system.

The *fifth* claim favorable to students points to civil rights. The civil rights movement increased youth awareness of what they regard as an historical injustice. This feeling has made it difficult for them to be proud of this country. This attitude has helped build a training ground for present and future radicals. Such a concept was clearly demonstrated in the early protests at Berkeley. It has been re-enacted on numerous campuses.

Up to this point five favorable and three unfavorable claims regarding student unrest have been presented under two major assumptions.

The *third* large group of assumptions is not classified as either favorable or unfavorable to students. The first of these three neutral claims focuses on modern technology. Historically, normal man lived with hope. He particularly has had hope that his efforts in the present will be rewarded in the future. Inherent within the hopes of man is his belief in the future. This also enables him to make commitments to goals and to other people. In contrast, observation of youth today may lead one to conclude that many of our present generation are living merely and literally from day to day.

A *second* neutral claim is that the student tries to relate to the expanding news media, particularly television. Some observers believe that because television is so readily available student protesters have exaggerated its importance. On the other hand, other observers hold it is entirely possible that the news media may be creating a climate in which students merely play a role. Certainly student recognition given by the news media has increased student awareness of their potential strength. Sometimes this recognition has led to a student's exaggerated sense of absolute power. During the past commencement exercises in the colleges and universities in the Los Angeles area alone, little news coverage was given, even to outstanding speakers. In contrast, the flare-up at Santa Barbara's Isla Vista, the student uprising and violence was given complete and continuous news coverage. And again, the winning of the N.C.A.A. baseball college division championship by a college was relegated to the eighth page of the sport section.

The *third* neutral claim springs from the almost universal reliance on scientific discovery. Youth, today, knows nothing but a world that seeks answers to questions of life not in religious fields but in science. They have come to believe that only science provides the answers.

Now turn from a look at:

The student to what makes him feel, think, act or behave as he does, and consider the second major topic of discussion. It is:

II. The Environment of Higher Education—The college or university inherits the human product. This product is molded in part by the home, school, church, society and the culture. The university also is subject to pressures from politicians, parents, and the community, as well as from students and faculty. But students and faculty now are being polarized with various labels such as: moderates, conservatives, radicals, and liberals. Students obviously are becoming more politically active. It has been said that the university was a place to search for significant truths. In recent years considerable concern has been expressed regarding the preservation of this concept. For example: In November of 1965, Dr. Grayson Kirk, president of Columbia University said: "The responsible student knows that a university would suffer irreparable damage if it allowed itself to become embroiled institutionally in a partisan fashion in any subject of current controversy . . . if any university becomes politicalized in this fashion, it will have lost its soul."

In the interval from 1965 to the present, if Dr. Kirk's statement is true, a great many universities, have in fact lost their souls. As recently as May 30, 1970 an article appeared in the *Los Angeles Times* expressing the deep concern of Dr. Charles A. Hitch, president of the University of California, at Berkeley, relative to the political climate of his university. He states that he was very disturbed about some of the restructuring of courses that has been done in the name of opposition to the Viet Nam war. He also discusses a letter which he had sent to all faculty of the University of California. In this letter he warns against mixing politics with class room instruction. Dr. Hitch says that the faculty is concerned chiefly with threats to academic feedom from the political forces outside the university. Nevertheless, he holds that he considers the threat of faculty members on the left to be equally as serious.

A conflict in educational philosophy is obvious, in a recent directive from chancellor Dumke of the California state colleges and a motion proposed by a faculty member expressing the opinion of a certain segment of the faculty. Both related to a possible moratorium on class attendance.

Dr. Dumke's directives were:

1) Academic schedules are to be maintained.
2) Faculty responsibilities to meet classes are to be maintained.
3) Student responsibilities to complete courses to receive credit are to be maintained: and
4) Established standards for grading and granting of credit are to be maintained.

In contrast the following is a motion proposed to the general faculty at my college on May 14, 1970: student requests for arrangements under which they may withdraw from college classes in order to devote their full energies to political and social questions, impel the general faculty to suspend, for one month, its regulations so that any student in good standing as of May 1, 1970 may file a change of program to alter his status, in any course, to:

1) Credit-no-credit
2) To credit for one unit less than the normal for the course, or
3) To withdrawal without penalty.

Such actions would have permitted an instructor, at his individual discretion, to offer several alternatives to a passing student who wishes to discontinue class work before the end of the semester.

Now, shall we move to my *third* major topic:

III. The Analysis of Student Power To Determine Its Ingredients—The ingredients refer to the various student groups. These groups are composed of individual members whose purposes range from a neutral position to that of the extreme activist. The neutral group has not become involved in violent action, but, they reject the values of society as well as values of their own peers who are in another group. This other group includes such individuals as the hippies whose purpose in life seems contradictory to hard work, self-determined success and responsibility. At the other extreme are students who vigorously reject political and economic status quo. This group in contrast to the others is well organized and includes off campus groups. It is making determined and even violent efforts to change the structure of society. These of course are the activists, nihilists, anarchists, the third world party and more recently the weatherman group. They would destroy the present social order and replace it with something. They have been unable to envision what this might be. Their approach is a highly emotionalized, planned confrontation, stimulation of mob action, use of vile, foul, language with little positive interplay between themselves and members of "the establishment" being permitted. They make unrealistic demands. Their threats of violence and destruction are screamed at those in authority. And, they, so far, are carrying out their threats. Experiences on my campus, involving the president and others, clearly demonstrates that there has been no demonstration of a desire on their part to make a positive approach or compromise to whatever their problems and concerns appear to be at the moment.

My *fourth* major topic asks:

IV. **What Are the Catalysts Which Energize or Motivate the Ingredients So That They Become Forces**—The transforming of human conditions and concerns into causes, if emotionalized highly enough, often has brought about sacrifices on the part of man. Even the sacrificing of one's life may be done without hesitation. If this highly emotionalized climate should continue, rational thinking by an involved group ceases to exist and that group's leader begins to think for the masses.

Included among these highly explosive causes today are: Viet Nam, Cambodia, Kent State University, the labeled "police state," civil rights, oppression of the poor and the ecology. Evidence reveals that student leaders have proven to be exceedingly proficient in leading their groups. Their ability to select the right cause at the right time and place for each confrontation is unusually skillful. These leaders also are intelligent. They are adept in inciting crowd reaction. This reaction is of a type which prevents resolution of the controversy at hand. For example a recent general faculty meeting was held at San Fernando Valley State College to determine the advisability of establishing a moratorium for the balance of the school year. During this particular meeting student violence was demonstrated by kicking of doors, stomping on the roof top of the auditorium, obscenities being shouted as faculty proceeded to the meeting. A *second* general faculty meeting related to Cambodia and Kent State prompted all political factions to submit proposals for consideration. Polarization of the faculty was *never* so clearly demonstrated when the vote was taken on various motions which ranged from closing the college down to continuing school as usual. (New classification of faculty: (good guys) the white hats vs the radicals.) Some universities have succumbed to these threats, demands, and pressures. As a result of the highly emotionalized climate, resulting changes in curriculum and college policies might well be suspect. The use of the power of force has been attempted by both student and faculty groups.

Now to my *fifth* major topic:

V. **The Profession—What Are Our Responsibilities?**—Most of us here have experienced student power within recent months. At one time I felt that student power was a direct result of weak or indecisive leadership. Recent events have led me to believe that in too many instances this *is* the case.

It is questionable whether the initiative and leadership on college campuses can now be regained by faculty and administration. In order not to be misunderstood, I would hastily add that I firmly believe that students should become involved in some policy-making in higher education. This does not imply that they engage in decision making.

The faculty and administration should:

1) Establish avenues of communication
2) Involve students on committees
3) Listen to students, and
4) Solicit their ideas.

The final decisions must be left to the professionals, the faculty and administrators who have greater knowledge and insights into and experience in the problems and their solutions.

Students have been so indoctrinated that they can no longer be treated as an aggregate of individuals attempting and wanting to learn. The present student body has resorted to acting as a pressure group interested in shaping its "working conditions" to their liking. They wish to determine who is employed to teach them: What is to be taught: How their performance is to be evaluated: Who shall be admitted or expelled from the student body and the campus and who should be promoted.

Student Power should make us more determined than ever to use good judgment, plan carefully and remain adminstrators and teachers, unafraid. We must retain our beliefs in the process which has given us the best that civilization has known. We can ill-afford to be stampeded into unrealistic compromises. For all of the furor and turmoil we have had, few if any constructive recommendations for change have come from the students. If society and human nature change, we should change. But, are we to be forced or coerced into changes which are the product of immature minds and uncontrolled emotions? Henry Hazlitt recently wrote, "Nothing is easier than to destroy. The tree that has taken a half century to grow can be sawed down in less than an hour. The cathedral that took generations to build can be demolished by a bomb in a minute. And without having a single building demolished, a great university can lose within a few months, by capitulating to some senseless student demand, everything that made it worth respecting. But when the problem comes of supplanting what has been destroyed, the rebels have only a hollow rhetoric for answer."

We have heard these days much about status-quo. If we are afraid of status-quo, perhaps we should not be in the profession. Scientific facts are status-quo. That man who can solve problems, is a status-quo concept. Let's not be bandwagon jumpers. Let us build and change constructively, basing change upon the best evidence we have. Let us continue to have an open mind. If the student has anything constructive to offer we should welcome such proposals for change. Emphasis should be based upon letting them know that we hope they can come up with something that is better for today and tomorrow, for them, and for those who will be in college in the future.

Finally, in spite of what looks like a continuing state of uncertainty and controversy, we should face the future with considerable hope and confidence. We can be proud that we are in a profession which is basic to the welfare of the individual and the group. Now—and later let us make sure that the student understands this underlying purpose.

The Challenge that Awaits the Physical Educator of the 70's

Bruce Ogilvie
San Jose State College

This presentation is offered as a challenge to those of you who have the major responsibility for the direction of physical education curriculum during the next decade. It is my contention that there must be a greater utilization of the humanities in order to broaden the educational base of majors in your field. They must be prepared to deal positively and constructively with the value reorientation that marks the ethical revolution now occurring in the United States. As time permits it will be my goal to tie together what may seem at first glance to be loosely related concepts and data. I would like, therefore, to assure you that I have a deep rational and emotional commitment to the points of view I am about to expound. In particular, I would like to touch upon the universally changing value structure as it affects intercollegiate competitive sports in the hope that we can utilize what youth is trying to teach us. Also we must become sensitive enough to promote those changes that are worthy of our support. I would like to review the limited empirical evidence about men who become the teachers of our athletes in order that we can determine if any reliable statement can be made that would provide us with a greater insight as to how we might broaden their educational base.

A brief examination will be made of the factors that form the basis for the negative stereotype which has so generally been accepted as the norm for judging this profession. In closing, I would like to share the data and the nature of the consultation experience which have provided me with the background to support my contention that the training of physical educators must be dramatically altered.

Why the Assault upon Competitive Sports?

Athletic competition, particularly at the intercollegiate level has become the focus of attention by numerous organized student groups. The strategy has been to expose and illuminate those aspects of sport which seem to be most blatantly at variance with the new social morality. Certainly those of you present are aware of conflict of values within most departments of physical education because I know from personal experience the same value struggles are separating almost every department in the U.S. The student activitists really intend to challenge the educator to begin to live more closely to his stated ideals. The introduction and first chapter of our book contained a prophetic warning specific to the catalyst, the racial question, which eventually opened the floodgates of criticism. (Ogilvie-Tutko, 1966.)

Every minority group which has felt itself to be the subject of discrimination has been able to find ready documentation for all forms of social injustice somewhere within sports. The political activist found very quickly that of the many institutions in the United States that were equally as vulnerable, intercollegiate sports attract the greatest pressure. The black athlete protest we were to experience at San Jose State College was the forerunner of what was about to occur in many parts of the country. Within a few short months the general public was exposed to individual minority experiences that were so emotionally loaded that even had they been a highly select example, sports morality was placed on trial. The demonstrations by Harry Edwards, Lee Evans and Tommy Smith were followed by numerous publications. Jack Olsen's four part series on the black athlete in Sports Illustrated magazine in 1968, Jack Scott's Ramparts article, Leonard Shecter's 1970 Look article, "The Coming Revolt of Athletes," John Underwood's 1969 Sports Illustrated series, "The Desperate Coach," plus Harry Edwards' forthcoming publication, "The Black Athlete in America," represent a growing trend. It is my contention that no matter how much these exposés are at variance with your philosophy or practice as an educator you will be forced to extract certain truths that exist within their data and use this information as a positive educational force.

Those of us in the West and Southwest are now meeting the challenge of the Chicano activist when he demands that we as educators readjust our priorities in terms of the socio-psychological realities as based upon the deprivations of his people. It was most interesting for me to observe the lack of personal involvement as I traveled about the U.S. informing audiences that our student government had voted to withdraw all financial support for intercollegiate sports. Since this fact was shared two years ago, I can now relate that there is but a single intercollegiate program in our conference that is assured continued student financial support, owing to minority student pressure that priority demands dictate funding of college programs.

Should you feel that the racial issue and the financial threats are sufficient concerns, I wonder how two new pressure groups, the Gay Liberation Front and Women's Liberation will contribute to your discomfort. In California, the Gay Liberation movement has made a frontal assault upon what they perceive of as the dehumanizing, depersonalizing, paramilitary nature of physical education. Women's Liberation has mounted an attack upon the administration of intercollegiate sport because they are able to use this form of sex discrimination as the ideal example of male chauvinism. Should some of you feel that their threat is an idle one, let me assure you that our experience is to the contrary. There is now a case pending against the San Diego School District testing the conference code with regard to exclusive male participation in league sports. Last week in my role as faculty representative at our conference meeting in Pasadena, we were submitted a request that we remove this same clause from the Pacific Coast Athletic Association Bylaws.

The foregoing socio-political threats have been selected from a growing list in order to sensitize those few remaining members of your profession who are still unwilling to face hard reality. Athletics, because of its visibility and its mass popular appeal, has become the most direct vehicle through which ethical, social and political immorality may be documented. There are still those in higher education who hold that the values revolution is but a passing phase of student life and have therefore tried to hold the line, awaiting the return to more traditional values. As a behavioral scientist, I can only say this is an ineffective denial of reality.

Why has the physical educator or more specifically, the coach borne the brunt of the attack? Also, what empirical evidence can be mustered in order to support either a negative or positive stereotype of those in the coaching profession? Is there evidence that these men would be particularly resistant to any values changing within the society? The psychometric data based upon standardized personality tests indicated high school, junior college, college and professional coaches do share some reliable trait variations from the population in general. (Ogilvie-Tutko, 1967; Ogilvie-Johnsgard, 1968; Ogilvie, 1968.) The personality traits which are predictably higher than the test norms are: achievement needs, emotional stability, psychological endurance, dominance needs, need for order, need to be deferential, and a well developed conscience. They will be moderately higher in trust, acceptance of personal blame, tough-mindedness, self-control, aggression, and lower in anxiety. They will tend to be low on need for autonomy, need to receive support from others, need to give support to others, need to be affiliative, need for change, and the need to study the motives of others. Our inability to gain cooperation necessary to design a comparative study whereby coaches could be matched with teachers from other specialized areas forced us to design research using them as their own controls. (Ogilvie-Tutko, 1968.) We were interested in attempting to gain some reliable information as to the self-picture youthful coaches might carry in their minds in relation to those personality traits which had distinguished coaches in past studies. The study was also intended to provide some information as to the function of conscious vs. unconscious mechanisms in terms of the degree of insight these men possessed in relation to each trait that was measured. Also, of considerable interest was the mean personality projection of this sample of men, each of whom was actively coaching one or more sports. Whether or not these men expressed in behavioral terms the personal life style they projected could not be determined but there was certainly no doubt that the mental picture as defined by their subjective projections opens the door to many interesting areas of inquiry.

Assuming for the moment that the mean projection scores represent a reliable coach's personal frame of reference, we would conclude that as a profession they place a high value on achievement, autonomy, affiliation, introspection, dominance, nurturance, change, psychological endurance, and heterosexuality.

In terms of their ideal as compared with their actual measured personality the discrepancies have particular significance for this presentation. They significantly underestimated their succorance needs; the need for others to be interested in them, take care of them, have others tell them when they have done well, basically to receive from others. They saw the ideal coach as being highly nurturant, which is the need to take care of others, treat others kindly, be sympathetic, but did not measure up to this standard themselves. They placed a high value on affiliation, change, and intraception, which is the need to understand the behavior and motives of others. These men measured moderately high on aggression but their ideal would have been a person who was extremely low in this trait. It becomes necessary to question the negative side of their idealized image in relation to those traits that would appear clinically to provide the humanistic balance to the highly structured personality of men who function as leaders of our young. A quotation from this study seems very much to the point:

"This study supports the generalization that coaches measure higher in those traits which determine getting ahead, succeeding and do not necessitate personal involvement. Those traits of personality which contribute most to being sensitive and also support close interpersonal relationships seem less well developed aspects of their personality."

The investigations of the values orientation of physical educators are so rare that only the most guarded inferences are warranted. Kenyon examined the basic value system of male physical education teachers in a Midwestern university. (Kenyon, 1965.) His investigation of psycho-social and cultural characteristics of prospective male teachers led him to conclude, "in contrast to other prospective teachers, have a more weakly formulated, somewhat traditionalistic philosophy of education; have a slightly lower social class background, are more dogmatic and authoritarian in their thinking; and tend to possess different social values." He continues, "the data tend to give empirical support for the negative generalization with respect to dogmatism, conservatism and authoritarianism so frequently attributed to the profession by liberals."

New Research Trends

There has been a great need for research designed to examine the relationship between personality and coaching perceptual objectivity. If we accept for the moment on the basis of limited data that men in this area of specialization do share common personality traits and values we must then determine how such personality structure functions in relation to coaching perceptual objectivity. This most promising area of investigation has been stimulated by active or former coaches who are seeking to alter the teaching environment in the direction of greater concern for possible individual differences. The work of Hendry and Albaugh seem to establish a new trend by examining the coaching perception of a select number of athletic traits in relation to the degree to which the coach possessed each trait. (Hendry, 1968; Albaugh, 1970.) Albaugh, using the Athletic Motivation Inventory which was designed to measure eleven personality traits specific to athletic motivation, examined the coach's ability to perceive these qualities in their basketball athletes. He found that only 10% of the trait assessment of their players were significant at the .05 level of confidence. One of a number of interesting results of this study was the observation that coaches were most accurate in assessing those traits on which they displayed their own highest trait scores. The traits that were most accurately assessed were leadership, drive and determination. These were followed by conscience development, coachability and trust. Conversely, they were much less accurate in their perception for those traits in which they were personally low. Athletic self-confidence, aggression, emotional control, acceptance of responsibility and mental toughness seemed to be the most unreliably assessed. Albaugh on the basis of his studies and coaching experience stressed the need to begin well designed studies to investigate the relationship between dogmatism, authoritarianism and coaching objectivity. He found that there was no significant relationship between coaching experience and accuracy of assessing these eleven athletic traits. He did find that experience with the players increased the reliability of judgments in that varsity assessment was more reliable than freshman assessment. This finding that specific aspects of personality seem to contribute significantly to the reliability of coaching assessment is consistent with the findings reported by Hendry using the Cattell 16 PF. He found that swimming coaches were most accurate in rating those traits that they themselves possessed to a greater degree.

The Attitudinal Expectancies Associated with Authoritarianism

It would seem worthwhile to review once again the attributes which are alluded to by student dissidents, the news media and other disciplines when the negative stereotype "authoritarian" is leveled at this professional specialty. A person so categorized would possess all or most of the following attitudes: *Conventionalism*—a rigid adherence to conventional middle-class values. *Authoritarian submission*—uncritical attitude towards idealized moral authorities of the in-group. *Authoritarian-aggression*—tendency to be on the lookout for and to condemn, reject and punish people who violate conventional values. *Anti-intraception*—opposition to the subjective, the imaginative and tendermindedness. *Superstition and stereotypy*—belief in mystical determinants of an individual's fate; the disposition to think in rigid categories. *Power and toughness*—preoccupation with dominance-submission, strong-weak, leadership-follower, an overemphasis upon the conventional attributes of the ego; exaggerated assertion of strength and toughness. *Destruction and cynicism*—general hostility, villification of the humane. *Projection*—the disposition to believe that wild and dangerous things go on in the world; projection outward of unconscious emotional impulses. *Sex*—exaggerated concern with sexual "goings-on."

The only adequate response to such generalizations would be investigations designed to measure the degree to which the stereotype can be proven. Those of us who have attempted over the years to provide enlightenment in areas in which we feel highly qualified have come to recognize all too well, the multiplicity of roles these men must play. It would be an outrageous requirement for one specialty to bear the responsibility for satisfying as many masters as does the coach. (Tutko-Ogilvie, 1967.)

The volume of mail we receive every week from coaches throughout the United States asking for information as to how they might perfect their skills in the area of motivation and handling of their athletes attests to the fact that they are very aware of personal deficiencies. They show genuine concern but find that there have been important areas which have been underdeveloped because those in charge of curricular change have failed to acknowledge the need for change.

I would like now to project upon the screen samples of our Athletic Motivation Inventory based upon actual examples from our consultation with teams and coaches. It will be my intention to demonstrate once again the need to reexamine the gap between present academic preparation and the prerequisite skills that are essential for future success in coaching.

The first projection shows the psychological profile of the athlete as represented by the circles and that of his coach as represented by the X's. This particular young man was a first string defensive lineman who had been a junior college all coast selection. In terms of this one-hundred and ninety question inventory the discrepancies between athlete and coach are all too obvious. (See Plate 1.) One is tempted to inquire as to the possibility for effective communication between student and teacher. It has been our experience that where trait discrepancies are most extreme, the problem of misunderstanding and miscommunication tend to increase. We have also found that those coaches who define their success in terms of self-fulfillment seem to be the ones with the strongest motivation to learn more about the application of psychological principles. The next projection is that of one of our Olympic gold medalists. As you can see even in world champions there is trait variation that expresses personal uniqueness. (See Plate 2.) The next projection is that of a young man who has been judged as possessing the motor giftedness to become one of our Olympic skiers. His coach has described him as one of his most difficult team members, as well as, one of the most unpredictable performers. (See Plate 3.) Projection number 4 is that of a professional team as compared with their coach. How would those of you who are very sophisticated in my field begin to apply these data? Using these data as an hypothetical model for teaching, training and game preparation would offer a tremendous challenge that could only be met successfully if one has had special training in the behavioral sciences. The final projection is that of coach and his university basketball team. How would you communicate a psychologically sound, learning theory based program for effective coaching? Certainly eleven sports specific traits represent only the most limited insight into the man or the team but this is the only reality upon which you have to design your teaching and motivational program. These few examples reinforce the fact that we are requiring the skillful application of one more specialty which is to be added to those of equipment man, publicity agent, right on down to financial genius.

Summary Statement

In closing let me state that it would be my strong recommendation that you as leaders in physical education begin now to realign your educational priorities in a direction befitting the 70's. Your future students must be exposed to the socio-political literature of all who feel oppressed. They must be taught to hear the plea of every citizen who offers his evidence that his constitutional rights have been placed in jeopardy. He must be prepared to utilize with confidence reliable psychological insight. Finally, he must be equipped to become a force for the constructive change in our society by setting an example for justice, equality and a more humane treatment of all men. This can best be accomplished by a greater exposure to the humanities.

PLATE I

COMPARISON OF COACH AND ATHLETE

COACH O_________
ATHLETE O________
ALL COAST J.C.

ISAM

Institute for the Study of Athletic Motivation
Dr. Thomas Tutko, Dr. Bruce Ogilvie, Leland Lyon

NAME______________ TEAM____________ POSITION____________

1 is very low   3 is low   5 is average   7 is high   9 is very high

1) **DRIVE**
Desire to be a winner

2) **SELF CONFIDENCE**
Sure of himself and of his ability

3) **AGGRESSIVENESS**
Easily asserts himself

4) **COACHABILITY**
Respects coaching

5) **DETERMINATION**
Sticks with things

6) **EMOTIONALITY**
Handles his feelings well

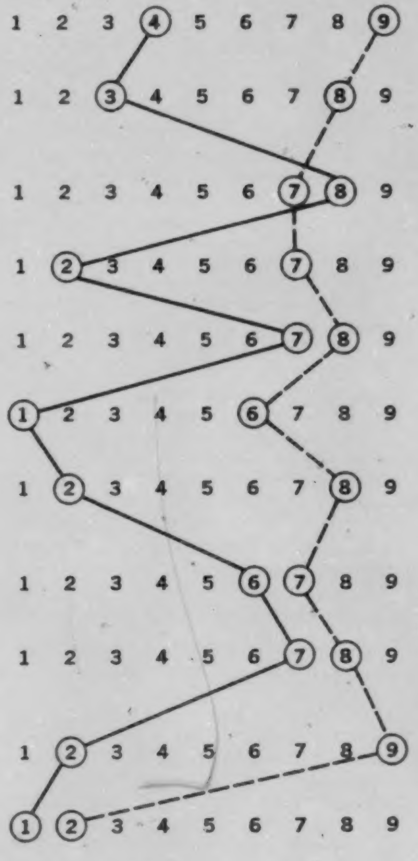
7) **CONSCIENCE DEVELOPMENT**
Does things as correctly as possible

8) **TRUST**
Accepts people at face value

9) **GUILT PRONENESS**
Accepts responsibility; accepts blame

10) **LEADERSHIP**
Wants to take charge of others

11) **MENTAL TOUGHNESS**
Can take a rough chewing out



HANDLING:

PLATE II
OLYMPIC GOLD MEDALIST TRACK

ISAM

Institute for the Study of Athletic Motivation
Dr. Thomas Tutko, Dr. Bruce Ogilvie, Leland Lyon

NAME________________ TEAM______________ POSITION______________

1 is very low 3 is low 5 is average 7 is high 9 is very high

1) **DRIVE** *Desire to be a winner*	1	2	3	4	5	6	7	8	[✓ 9]
2) **SELF CONFIDENCE** *Sure of himself and of his ability*	1	2	3	4	5	6	7	8	[✓ 9]
3) **AGGRESSIVENESS** *Easily asserts himself*	1	2	3	4	5	[✓ 6]	7	8	9
4) **COACHABILITY** *Respects coaching*	1	2	3	4	[✓ 5]	6	7	8	9
5) **DETERMINATION** *Sticks with things*	1	2	3	4	5	6	[✓ 7]	8	9
6) **EMOTIONALITY** *Handles his feelings well*	1	2	3	4	5	6	7	[✓ 8]	9
7) **CONSCIENCE DEVELOPMENT** *Does things as correctly as possible*	1	[✓ 2]	3	4	5	6	7	8	9
8) **TRUST** *Accepts people at face value*	1	2	[✓ 3]	4	5	6	7	8	9
9) **GUILT PRONENESS** *Accepts responsibility; accepts blame*	1	[✓ 2]	3	4	5	6	7	8	9
10) **LEADERSHIP** *Wants to take charge of others*	1	2	3	4	5	6	7	8	[✓ 9]
11) **MENTAL TOUGHNESS** *Can take a rough chewing out*	1	2	3	4	5	6	[✓ 7]	8	9

HANDLING:

PLATE III

POTENTIAL CHAMPION SKIING

ISAM

Institute for the Study of Athletic Motivation
Dr. Thomas Tutko, Dr. Bruce Ogilvie, Leland Lyon

NAME________________ TEAM________________ POSITION________________

1 is very low 3 is low 5 is average 7 is high 9 is very high

1) **DRIVE** *Desire to be a winner*	[✓ 1]	2	3	4	5	6	7	8	9
2) **SELF CONFIDENCE** *Sure of himself and of his ability*	1	2	3	4	5	[✓ 6]	7	8	9
3) **AGGRESSIVENESS** *Easily asserts himself*	1	[✓ 2]	3	4	5	6	7	8	9
4) **COACHABILITY** *Respects coaching*	1	2	[✓ 3]	4	5	6	7	8	9
5) **DETERMINATION** *Sticks with things*	[✓ 1]	2	3	4	5	6	7	8	9
6) **EMOTIONALITY** *Handles his feelings well*	1	2	3	4	5	6	7	8	[✓ 9]
7) **CONSCIENCE DEVELOPMENT** *Does things as correctly as possible*	1	[✓ 2]	3	4	5	6	7	8	9
8) **TRUST** *Accepts people at face value*	1	2	3	4	5	[✓ 6]	7	8	9
9) **GUILT PRONENESS** *Accepts responsibility; accepts blame*	1	[✓ 2]	3	4	5	6	7	8	9
10) **LEADERSHIP** *Wants to take charge of others*	1	2	3	[✓ 4]	5	6	7	8	9
11) **MENTAL TOUGHNESS** *Can take a rough chewing out*	1	2	3	4	5	[✓ 6]	7	8	9

HANDLING:

PLATE IV

COMPARISON OF COACH AND PROFESSIONAL TEAM

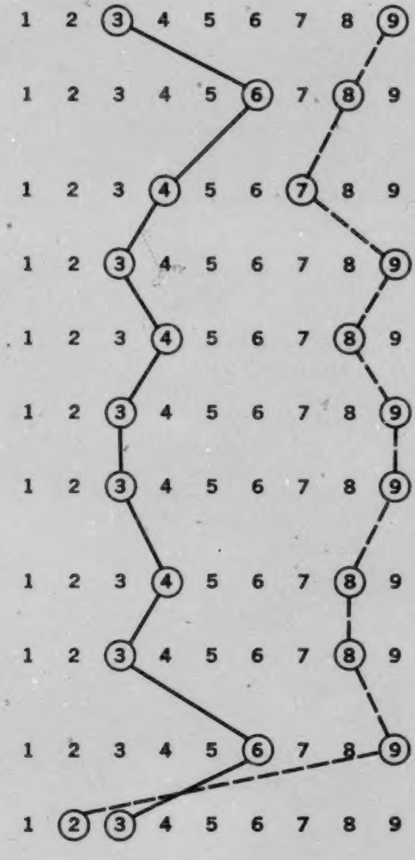
COACH O------
TEAM O______

ISAM

Institute for the Study of Athletic Motivation
Dr. Thomas Tutko, Dr. Bruce Ogilvie, Leland Lyon

NAME____________ TEAM____________ POSITION____________

1 is very low 3 is low 5 is average 7 is high 9 is very high



1) **DRIVE** *Desire to be a winner*	1 2 [✓ 3] 4 5 6 7 8 [✓ 9]
2) **SELF CONFIDENCE** *Sure of himself and of his ability*	1 2 3 4 5 [✓ 6] 7 [✓ 8] 9
3) **AGGRESSIVENESS** *Easily asserts himself*	1 2 3 [✓ 4] 5 6 [✓ 7] 8 9
4) **COACHABILITY** *Respects coaching*	1 2 [✓ 3] 4 5 6 7 8 [✓ 9]
5) **DETERMINATION** *Sticks with things*	1 2 3 [✓ 4] 5 6 7 [✓ 8] 9
6) **EMOTIONALITY** *Handles his feelings well*	1 2 [✓ 3] 4 5 6 7 8 [✓ 9]
7) **CONSCIENCE DEVELOPMENT** *Does things as correctly as possible*	1 2 [✓ 3] 4 5 6 7 8 [✓ 9]
8) **TRUST** *Accepts people at face value*	1 2 3 [✓ 4] 5 6 7 [✓ 8] 9
9) **GUILT PRONENESS** *Accepts responsibility; accepts blame*	1 2 [✓ 3] 4 5 6 7 [✓ 8] 9
10) **LEADERSHIP** *Wants to take charge of others*	1 2 3 4 5 [✓ 6] 7 8 [✓ 9]
11) **MENTAL TOUGHNESS** *Can take a rough chewing out*	1 [✓ 2] [✓ 3] 4 5 6 7 8 9

HANDLING:

PLATE V

COMPARISON OF COACH AND UNIVERSITY TEAM

COACH O- - - - - - -

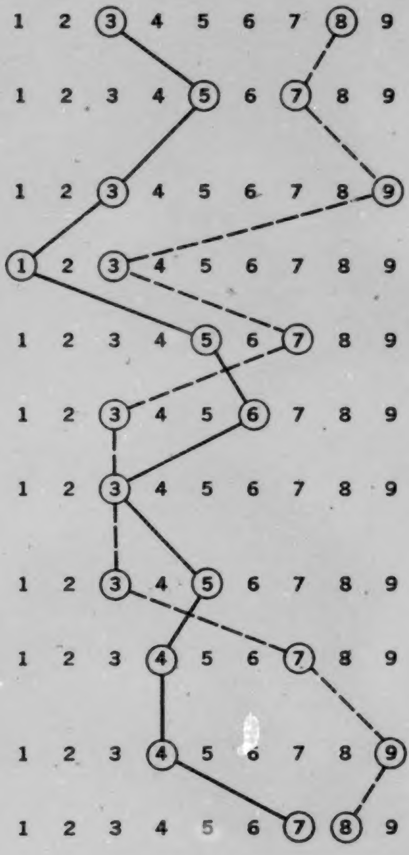
TEAM O________

ISAM

Institute for the Study of Athletic Motivation
Dr. Thomas Tutko, Dr. Bruce Ogilvie, Leland Lyon

NAME________________ TEAM______________ POSITION______________

1 is very low 3 is low 5 is average 7 is high 9 is very high



1) DRIVE 1 2 [✓ 3] 4 5 6 7 [✓ 8] 9
Desire to be a winner

2) SELF CONFIDENCE 1 2 3 4 [✓ 5] 6 [✓ 7] 8 9
Sure of himself and of his ability

3) AGGRESSIVENESS 1 2 [✓ 3] 4 5 6 7 8 [✓ 9]
Easily asserts himself

4) COACHABILITY [✓ 1] 2 [✓ 3] 4 5 6 7 8 9
Respects coaching

5) DETERMINATION 1 2 3 4 [✓ 5] 6 [✓ 7] 8 9
Sticks with things

6) EMOTIONALITY 1 2 [✓ 3] 4 5 [✓ 6] 7 8 9
Handles his feelings well

7) CONSCIENCE DEVELOPMENT 1 2 [✓ 3] 4 5 6 7 8 9
Does things as correctly as possible

8) TRUST 1 2 [✓ 3] 4 [✓ 5] 6 7 8 9
Accepts people at face value

9) GUILT PRONENESS 1 2 3 [✓ 4] 5 6 [✓ 7] 8 9
Accepts responsibility; accepts blame

10) LEADERSHIP 1 2 3 [✓ 4] 5 6 7 8 [✓ 9]
Wants to take charge of others

11) MENTAL TOUGHNESS 1 2 3 4 5 6 [✓ 7] [✓ 8] 9
Can take a rough chewing out

HANDLING:

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PHILOSOPHIC RESEARCH THEORY

Theory and Design of Philosophic Research in Physical Education

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INTRODUCTION

There are several persons in physical education, or concerned with the phenomena of interest of physical education, who have been doing some type of philosophic research. If those of us who have attempted some kind of philosophic research are asked what it is we do when we do philosophic research, we often respond with such expressions as "examine assumptions," "analyze terminology," "describe experience," or "deduce implications." Seldom have we taken much time to focus upon what it is we do in doing philosophic research. Much to the consternation of students who might like to do philosophic research and frequently to the disdainful disgust of our experimentally-research-oriented colleagues, we have not often been lucid in our declarations of philosophic method. Consequently, we are vulnerable to the charge that "anything goes" in philosophic research.

There appear to be several reasons for such lack of clarity. We are relatively new to such research; we have not traditionally had adequate preparation to do such research; the method of philosophic research is not as clearly defined as some other research methods; and, of course, philosophic research is such that it is not easily explained. Given these realities and difficulties, an attempt to explore philosophic research method can be timely and salutary even if it only identifies what kinds of questions to ask. Without attempting to give a too prescriptive step-by-step account of philosophic research method and thus oversimplify what is complex, and without making the case that a rationale is inappropriate for the procedure of philosophic research and thus encourage intellectual anarchy, the purpose of this paper is to discuss the theory and design of philosophic research in physical education.

Approach

In the remainder of this paper four kinds of things will be done. First will be an attempt to identify some of the different types of philosophic research which have been done in areas of interest to physical education. This categorization does not claim to be either complete or necessarily the best possible but at the least, representative. Also, no attempt will be made to identify either what is "true" philosophic research or even what a "real" philosophic problem is.† If the exclusion of such concerns seems to be avoiding a necessary issue, there are reasons for it. One, the diversity of types of philosophic research is beyond the competency of this writer to discuss as well as being too much for any clear treatment here. Two, although anyone who wishes to do philosophic research must identify both a legitimate problem and a method to deal with the problem, no answer acceptable to all is available with respect to these concerns. Consequently, emphasis in this paper is, properly, on clarification of alternatives. Disagreement and confusion about what a philosophic problem is and the proper method of resolving such a problem reigns in technical philosophy as a major issue. Accordingly, it would appear that physical educators who wish to do philosophic research can be expected to be aware of alternatives, what the promise and limits of alternatives are, and make their choices among alternatives.

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† For analysis of this latter concern from a particular kind of commitment see (8).

The second major task of this paper will be to examine the theory of the types of philosophic research identified. This examination will proceed by asking four questions in common of each research method. These questions will be stated at this point and will not be repeated with respect to each method of research.

1) What is the direct, explicit focus of inquiry? This means toward what does each method of research orient its efforts? What does it look at? In the text of the paper this is to be referred to simply as "focus."
2) What does the method attempt to reveal with respect to that which is its direct, explicit focus? This means what does each method attempt to supply as a result of the research effort? In the text, to be referred to as "products."
3) How may the results of inquiry be verified? This means how can the products of a particular piece of research using a particular method be verified within the theory of that same method? In the text, to be referred to as "verification."
4) What kinds of assumptions are made? This means what is understood in advance if any researcher hopes to use a particular method adequately? It does not mean what are the assumptions of the method per se. To be referred to as "assumptions."

The third task of this paper will be to explore the design of the identified kinds of philosophic research. Design of the types of research will be clarified by asking two questions in common of each type of research. These questions are stated here but will not be repeated.

1) What are the major elements which appear in the research process? This means in what kinds of operations does the researcher engage in completing the research? In the text, to be referred to as "elements."
2) How do these elements relate to each other? This means are the elements necessarily related in a given sequence, are they independent of each other, are their relationships of a flexible variety? Relationships of the elements will be discussed in a unified way in sections on "Elements and relationships."

The last portion of the paper will attempt to summarize the paper and offer general suggestions regarding philosophical research in physical education.

DIFFERENT TYPES OF PHILOSOPHIC RESEARCH IN PHYSICAL EDUCATION

Identification of Types

Three types of research labeled as theory building, structural analysis, and phenomenology will be discussed here with reference to the questions on theory and design. Linguistic analysis, a fourth type, will not be included.†

For each type of research method at least one instance of research will be cited as a case study and that instance will be used to clarify the theory and design of the type. While a particular instance of a type may help in clarification, it must be clear that an instance is seldom, if ever, the perfect manifestation or ideal model of a research method.

For:

> It should go without saying . . . the . . . methods are "ideal types," not to be expected in their pure forms in concrete philosophic discourses (18, p. 8)

and

> Consequently, when we set out to give an account of philosophical method, what we are trying to describe is not so much a method actually followed by ourselves or anyone else, as a method which in our philosophic work we are trying to follow, even if we never entirely succeed. (8, p. 4)

Theory Building

Although several different researchers have attempted to build theories in physical education one of the products which can be labeled a philosophic theory is that of Ellfeldt and Metheny with respect to movement and meaning.(9) Although this original work has been extended and expanded by Metheny, analysis here will focus upon its original appearance in the *Research Quarterly.*

Focus—As stated by Ellfeldt and Metheny, "The central problem of this study was the development of a tentative general theory about the meaning of human movement kinesthesia as a somatic-sensory experience which can be conceptualized by the human mind." (8, p. [illegible]) As a method of research, theory building attempts to isolate a particular kind of phenomenon (in the cited case, "the meaning of human movement kinesthesia as a somatic sensory experience") and examine that particular phenomenon in accordance with a given philosophical position (in the cited case, a philosophical position which deals with examination of how sensory experience "can be conceptualized by the human mind"). The explicit focus, then, of such study is examination of a particular phenomenon in terms and structures consistent with and derived from an existing philosophic statement.

Products—The result of this type of research is a stated theory which explains the particular phenomenon of interest in accord with the selected philosophy. In the example case, the stated theory was "*a kinestruct is the non-discursive kinesymbolic expression of the import of its kinescept.*" (8, p. 378) This stated theory is that which results form the original examination of the phenomenon of interest in accord with the given philosophy. The resultant stated theory attempts to *explain* how and why ". . . the meaning of human movement—

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† The exclusion of linguistic analysis as a type of philosophic research implies no judgment, negative or positive, either with regard to its merit as a philosophic method or to its potential for contributing to knowledge in physical education. The basic reason for exclusion here is very practical and certainly not founded in any carefully developed rationale for necessary exclusion. The fundamental reason for leaving linguistic analysis out of this treatment is that the researcher does not know the method well enough other than to say that it exists and, further, has not found the time available yet to undertake needed study. Unfortunately, the best thing which can be done under these circumstances is to apologize and to refer the reader to a few interesting examples of research of the linguistic analysis type in areas of interest to physical education.

Keating, James W. "Heart of the Problem of Amateur Athletics." *Journal of General Education* 16:261-72, January 1965.

——————— "Sportsmanship As a Moral Category." *Ethics* 75:25-35, October 1964.

——————— "Winning in Sport and Athletics." *Thought* 38:201-10, Summer 1963.

kinesthesia as a somatic sensory experience . . . ." (the particular phenomenon) can be understood as a particular case of how sensory experience ". . . can be conceptualized by the human mind" (the philosophy of symbolic transformation).

The stated theory also has the power to produce by products in the form of further research efforts. This cited case theory has produced several more theory building efforts by Metheny. The original theory has been refined and built into a more sophisticated, structured, and differentiated theory in Metheny's *Connotations of Movement in Sport and Dance* (1965) and *Movement and Meaning* (1968).

Verification—Verifying a theory has several facets. One mode of verification is to examine the internal logic of the theory itself. For example with the case study, the specific new terms created, kinestruct, kinescept, and kinesymbol, and the described relationships among them can be examined for logical consistency in two ways. First, the claimed relationships between the terms kinescept, kinestruct, and kinesymbol can be examined for logical coherence, that is, are the claims made about these relationships logical in terms of the definitions supplied for the terms within the theory? Second, are the words chosen and defined as expressive of the most common elements of the particular phenomenon really the most common elements to be defined according to the structure of the source philosophy? To restate this, are the terms kinescept, kinestruct, and kinesymbol and their definitions really the most universal elements of human movement as they would be logically selected by and within the major tenets of the philosophy of symbolic transformation? These two operations may be termed as internal criticism of the theory.

But theories are verified in ways other than internal criticism. For example, the statements made in the theory may be examined for consistency with external evidence, that is, are the statements made supported or refuted by evidence from other sources? In the instance of the cited case study, such an external criticism of the theory was made by Hubbard.(18) In essence, this type of external criticism involves examining the given theory for its consistency with evidence produced out of differing theoretical bases.

The third type of verification arises from the theory itself and is an effort to test the explanatory power of the theory. In the example theory, the authors stated, "The validity of this general theory must now be tested by determining to what extent it seems to account for observable manifestations of the phenomena to which it refers." (5, p. 272) The verification process here is determining whether the theory can provide a rational explanation of the variety of differing specific cases implied in the general area of concern. In the specific case identified in, "How does a person comprehend or kinesceptualize a kinestruct created by another person?", this process of verification would be to determine whether the stated theory can explain how a person, other than the mover himself, could understand the meaning of someone else's movement. If the theory as stated can afford a rational answer to that concern, it is an instance of verification of the theory. If the theory cannot provide a rational answer, then, several alternatives appear: the theory is not comprehensive enough to cover the particular case; the particular case is not legitimately in the realm to be explained by the theory; the theory, with revision, could be expanded to cover the particular case; the theory is fallacious.

A difference of this last verification process is to be noted. The difference is between verification of a *scientific* theory of the hypothetical-deductive type and a philosophic theory. In the hypothetical-deductive scientific theory "the validity of . . . theory is dependent upon the extent of the agreement between the deduced consequences, on the one hand, and the observation of phenomena to which it refers, on the other." (21, p. 64) In other words, in the scientific theory, verification is made by *empirical* correspondence between deduced consequences and sensed appearances of the phenomena. In the philosophical theory, verification is made by *rational* correspondence between the variety of observable manifestations of the phenomena of interest and whether the stated theory is capable of explaining all manifestations in ways consistent with the content of the theory.

Assumptions—In order to undertake research of the theory building type it is assumed:

1) That the particular source philosophy used to construct the theory is valid;
2) That the researcher has an adequate and accurate understanding of the particular source philosophy;
3) That the particular source philosophy is an appropriate philosophic position for explanation of the particular phenomenon of interest;
4) That the researcher has a background of knowledge of the area of the particular phenomenon of interest.

Elements and Relationships—Elements of the process of theory building are conceived as "things which are done" in the operation as differentiated from the more specific functions which get the things done. Such functions as inductive and deductive reasoning using analysis and synthesis are assumed as inherent in what most philosophical researchers do. (1, p. [illegible])

Specifically, how and when a researcher uses analysis or synthesis in either a deductive or inductive fashion will vary with each researcher and with the given problem for research. Therefore, the elements discussed here are not necessarily steps in the process, although the identified relationships will tend to indicate some logic of sequence, but the products coming from inductive and/or deductive reason using analysis and/or synthesis. Furthermore, since the attempt is being made to exemplify philosophic research by case study illustrations, it should be pointed out that the logic of reporting study results is not always the same as the logic of the process of doing the study. Hence, what is reported by researchers probably is not in the same sequence as it actually occurs in the research process.

The elements of the theory building process are: choosing the phenomenon of interest; identifying the particular facet of the phenomenon of interest to be studied; selecting, describing, and explaining the chosen source philosophy; relating the source philosophy to the particular phenomenon of interest; identifying the common factors exhibited by all manifestations of the phenomenon of interest in accord with the concepts of the source philosophy; developing a correlating language which ties the phenomenon of interest to the source philosophy; discussing and explaining the developed correlating language; stating the theory.

In the process of theory building one of the first elements is *choosing* the phenomenon of interest for which the theory is to be developed. This choice often occurs at the unconscious level. In the case study the phenomenon of interest was human movement. This tells us that the "scene" for theory development is human movement as distinct from animal or other movement.

When the scene has been chosen, the researcher may *identify* what facet of the scene he wishes to explore. In the Ellfeldt-Metheny research the part identified was ". . . development of a . . . theory about the meaning of human movement-kinesthesia as a somatic-sensory experience which can be conceptualized by the human mind." ([illegible], p. [illegible])

Operationally, the next element in the process of theory building may occur before or after the elements discussed above. This element is *selecting, describing, and explaining* the philosophy to be used as a source. As indicated previously, for the case study here, the philosophy of symbolic transformation was selected by the researchers. Presumably, selection of this philosophy about the relation of percepts and concepts was made because it involves direct attention to non-discursive perceptual forms including, specifically, dance. The philosophy was then *described* with special emphasis upon the relation of sense experience to human conceptualization. Description of the relation of perception and conception operates to *explain* the philosophy in reference to the particular phenomenon of interest identified for study, namely, "...the meaning of human movement-kinesthesia as a somatic-sensory experience which can be conceptualized by the human mind." (9, p. [illegible])

This last point indicates the element in the process of *relating* the philosophy to the specific phenomenon of interest. Discussion of the next element in theory building will show this relationship being made from the opposite direction.

The element which relates the specific phenomenon of interest to the philosophy is *identifying* the factors exhibited in common by all manifestations of the phenomenon of interest in accord with the concepts of the source philosophy itself. This involves analyzing the characteristics of the phenomenon of interest within the context of the philosophy and identifying those characteristics which occur in all instances and which are expressible in terms consistent with the conceptual system of the philosophy. In the Ellfeldt-Metheny research the identified characteristics were structural, perceptual, and conceptual. These characteristics identified as ". . . common to all human movement. . . ." (9, p. [illegible]) relate the phenomenon of interest to the philosophy by development of a correlating language as follows:

1) The term structural correlates with the concept of form in the philosophy of symbolic transformation in that it is defined as "a dynamic somatic pattern. . . ." (9, p. [illegible]) More direct correlation is achieved by developing the term "kinestruct";
2) The term perceptual correlates with the concept of sensory perception in the source philosophy in that it is defined as perceiving "... by the kinesthetic sensorium." (9, p. [illegible]) More direct correlation is supplied by creating the term "kinescept";
3) The term conceptual correlates with the concept of symbolization in the source philosophy in that it is defined as having "... some significance as a response made by a human being to his sensory perception . . . ." (9, p. [illegible]) Direct correlation is added by supplying the term "kinesymbol."

These examples of a correlating language illustrate the element of the research process which involves *developing* a set of terms which clearly and definitively tie the common characteristics of the phenomenon of interest to the philosophy. It may be noted that developing a set of terms operates to relate the phenomenon of interest to the source philosophy, that is, the relationship is seen *from* the *phenomenon to* the *philosophy*. Earlier, the research element called explaining the philosophy indicated how the relationship is seen *from* the *philosophy* to the *phenomenon* of interest. The combination of these two elements allows the researcher to understand and express the full relationship which exists *between* the philosophy and the phenomenon of interest.

The researcher, understanding the relationship between the source philosophy and the phenomenon of interest, is now able to enter into the next element in the process. This element is *discussing* and *explaining* the developed set of terms and their relationships in a way consistent with the conceptual structure of the philosophy. In the case study this was accomplished by examining "The Nature of the Kinestruct," "The Nature of the Kinescept," and "The Nature of the Kinesymbol." (9, pp. [illegible]-71) Completion of this element prepares for realization of the last element.

The last element in the theory building process is *stating* the theory itself. Essentially this amounts to solving the original research problem. This was development of a tentative general theory which would explain the particular phenomenon of interest. The statement of the theory indicates how the originally identified specific phenomenon of interest is explainable as a particular case covered by the source philosophy. In the case study, the stated theory explains how ". . . the meaning of human movement-kinesthesia as a somatic-sensory experience . . ." can be explained as one case of how sensory experience ". . . can be conceptualized by the human mind." The stated theory which accomplishes that task in the case study is "*a kinestruct is the nondiscursive kinesymbolic expression of the import of its kinescept.*"(15, p. [illegible])

Structural Analysis

A second type of philosophic research of interest to physical educators may be called structural analysis. This approach has been employed by educational philosophers and, in physical education, has been used by researchers who come to philosophizing about physical education through their study in educational philosophy. Although several have used variations of this approach, (2, 9, 17) the case studies to be used here are by Zeigler.(34, 35, 36, 37) These sources show variations of structural analysis which will be treated independently where appropriate.† One variation of structural analysis can be labeled the implications approach and is exemplified in Zeigler's *Philosophical Foundations for Physical, Health, and Recreation Education* and in *Physical Education: Reconstructionism or Essentialism?* The second variation of structural analysis can be called the persistent problems approach and the example case is Zeigler's *Problems in the History and Philosophy of Physical Education and Sport*.

Focus – The implications approach to structural analysis focuses on the deductive consequences (or implications) for education and physical education of the metaphysics, epistemology, logic, and axiology of existing philosophic systems.

> As we move forward to a consideration of the three leading philosophical tendencies . . . and their implications for education, and still more specifically for physical . . . education, the plan is to treat each philosophy in a fairly identical fashion. . . . First, we will present the metaphysics . . . , epistemology . . . , logic . . . , and axiology . . . in education. Then, we will turn to the implications of the particular philosophical tendency for the recurring problems of education. . . . In the chapter immediately following, the implications for aims, objectives, and methods of physical, health, and recreation education will be indicated.(35 p. [illegible])

In Zeigler's work the philosophic systems of naive naturalism, experimentalism, realism, and idealism were examined as the sources for implications. In education the categories of society, school, and the individual; educational aims and objectives; process of education were used to explicate the implications while, in physical education, the categories were aims and objectives and methodology. The point of departure of this variation of structural analysis is the existing framework of a philosophic system.

The starting point for the persistent problems variation of structural analysis is identification of the persistent problems. In Zeigler's work the basis for selection of the persistent problems seems to be agreement among professional colleagues and students upon present problem areas which, when examined, indicate that they have also been problems in the past.

> . . . it is based completely on *the problem areas of the present* and an effort to illuminate them . . . . The student moves back and forth from early times to the present as different aspects of the subject are considered. . . . These persistent problems, then, are ones that recur again and again down through the ages, and they will in all probability continue to occur in the future.(37, pp. 1-4 and 1-5)

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† It is worth noting in passing that the products of structural analysis can provide substance for still another type of analysis called comparative analysis. A valuable insight into this approach is provided by Vanderzwaag in (8).

The focus of the persistent problems approach is upon the declared problems and clarifications and logical positions offered for the problems by the philosophical systems. In the Zeigler work the identified problems are: determination of educational values; the influence of politics, nationalism, economics, and religion upon physical education; methods of instruction; the role of administration; the healthy body; the use of leisure; amateur, semi-professional, and professional athletics; progress as a concept. These problems are discussed in relation to experimentalism, realism, idealism and, in some cases, existentialism.([illegible])

Products—The products of the implications and persistent problems approaches to structural analysis are of the same type. Each approach, although beginning at a different point, results in a structurally organized set of statements of the logical emphases and positions of the philosophic systems in the identified categories. For instance, in the category "aims and objectives" used in Zeigler's work, the following statements indicate emphases of different philosophic systems:

> The experimentalist is much more interested in promoting the concept of total fitness rather than physical fitness alone.(38, p. 107)
>
> The realist believes that education of the physical should have primary emphasis in our field.(38, p. 160)
>
> The idealist in physical . . . education believes in education of the physical, and yet he believes in education through the physical as well.(38, p. [illegible])

It should be obvious that these parallel statements provide a substantive basis for comparative analysis. (cf ante)

In addition to such parallel structures, results of structural analysis provide a coherent set of statements of emphasis in physical education derived from a single philosophic system. This is to say, there is an internal consistency of the statements of implications deduced from one philosophy, say, idealism, in the several categories. For instance, consistency may be detected in the statements below taken from two different categories. First, under "aims and objectives":

> The idealist is, of course, extremely interested in individual personality development and self-realization. He believes that man should develop all of his "natures" nearest to their utmost possibility. . . . Desirable objectives for physical education would include the development of responsible citizenship and group participation. In competitive sport, the idealist believes that the transfer of training theory is in operation with the development of desirable personality traits.(38, p. [illegible])

Second, under "methodology":

> An idealistic teacher, therefore, would like to feel that he is the creator and determiner of his own method. . . .
>
> Students, under careful guidance, should be most actively involved in the educational process. . . .
>
> In the classroom an "informal dialectic" should be carried on a good share of the time. The teacher should not imply that there is only one way of thinking about some problem or, for that matter, of performing some skill in the gymnasium. . . . Good idealistic teaching method would "create a slight feeling of suspense for the student—suspense to be resolved only by his own decision or active effort."(38, p. [illegible])

The product of a structurally organized set of statements of logical emphases and positions of one particular philosophy in the differing categories also provides a potential by-product. This by-product is a frame of reference for the physical educator ". . . to check his present practice as well as his future decisions."(15, p. 3)

Verification—Verification of structural analysis products proceeds by internal and external criticism. Internal verification is accomplished primarily by examination of the deductive implications stated for physical education to determine their consistency with statements of emphasis made for education. Further, deductive emphases stated for education may be examined for their consistency with the metaphysics, epistemology, logic, and axiology of the parent philosophic system. Examples of statements which could be analyzed for consistency follow here. Proceeding from a position in the philosophy of realism to an implication for education and then to an implication for physical education:

> From the standpoint of metaphysics, the realist believes that the world is real and is just what it seems to be . . .
>
> Realists, generally speaking, accept a deterministic world in which things happen because many interrelated forces make them occur in a particular way; it is therefore a world of cause and effect.(35, p. 180)
>
> As Wild sees it, the primary task of education is to transmit knowledge. He explains that "genuine, stable integration of the whole culture can be attained only by universal principles grounded on observation." Whatever man has discovered to be true because it conforms to reality must be handed down to future generations as the social and cultural tradition.(35, p. 184)

In discussing the positions of Charles H. McCloy, Zeigler says:

> In his chapter entitled *How About Some Muscle?* he asserts that we have "abandoned overnight . . . twenty-five centuries of good experience." He explains further how "the basis of all physical education—developmental, educational, corrective or any other —is *the adequate training and development of the body itself.*" (35, p. 140)

Although such statements may be scrutinized for internal consistency, what *kind* of consistency constitutes verification seems to be an issue. In a most interesting treatment, Burns(5) identifies three distinct senses of the logic of the educational implication as a kind of statement which, by some identifiable rule, relates educational practice and formal philosophy. He says, "Educational philosophers assume, evidently with some justification, that there is indeed some kind of organic connection between philosophy and educational practice."(5, p. 68) Granting this, however, still does not tell what kind of connection of consistency is a valid one. Consequently, until the nature of the consistency is declared, validating consistency of statements in different categories or at different levels of generalization, i.e, internal verification, is rudderless. Such verification remains rudderless until the researcher states what kind of relationship it is that connects philosophy and educational practice.

Burns identifies three kinds of connections between formal philosophy and educational practice: the logical, or that specified by formal relation of philosophical antecedents to educational consequents; the material, or that specified by empirical relation of antecedent and consequent; the pragmatic, or that specified by psychoiogical relation of antecedent and consequent.(5) With these in mind, a structural analysis researcher could state what kind of relationship he uses between antecedents and consequents and, thus, his results could be verified via either logical or empirical, or psychological tests as appropriate.†

In Zeigler's work in another source(34, pp. 7-81) a verification procedure of another variety is indicated. After an examination of the beliefs of a reconstructionist philosophy and developing statements of implications of such beliefs for education and physical education, he says, "Data of both an impirical and scientific nature were gathered which tended to support the implications drawn in the analysis phase of the study."(34, p. 9) This appears to be a procedure whereby the deductively formulated implications are supported, not only by either their formal, empirical, or psychological connections with philosophical antecedents, but also by whether or not external sources of empirical and scientific data support the consequent implications. This appears to be an external verification procedure.

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† In passing, it is worth noting that Burns specifically denies that the logical or material implication varieties adequately explain or formalize the connection between formal philosophy and educational practice.(5, p. 68)

Another kind of external verification procedure in structural analysis is indicated in the last phrase of this quote:

> This is then followed by a critical examination to determine not only whether the argument is formally consistent and sound, i.e., whether its conclusions indeed follow from its premises or are rendered likely by them, *but also to what extent these premises themselves are supported by available evidence.*(19, p. 7)†

This complete quote would indicate that there is, first, an internal verification procedure of examination of the formally consistent relations of conclusions and premises. Since ". . . deductive arguments are concerned solely with the relationship between the premises and conclusions; they are not concerned with the truth of either."(38, p. 34), the combination of internal and external verification indicated by the entire quote tells us two important things. First, the internal verification of the formal consistency of premise and conclusion tells us only if the logic of the relationship is valid and not if either the premises or conclusion are true. Accordingly, we can only say with confidence that the relationship between philosophical antecedent and educational consequent is formally correct. Second, if we undertake to verify the premises by support from available external evidence, if the premises are, in fact, supported by available external evidence, and if the internal validation has shown the formal correctness of relation of premises and conclusion, then, by the rules of deductive logic, we may say that the conclusion is formally valid *and true*. This is based on the rule of deductive logic that if the premises of an argument are true and if the relation between premises and conclusion is formally correct, then the conclusion is necessarily true. (38, p. 38 and 39)

It is both beyond the province of this treatment to discuss the validity of deductive logic and beyond the competency of the researcher to do so. Also, no attempt will be made to deal with identifying legitimate "available evidence" which could support the premises of a deductively formed argument. Because of these realities discussion of modes of verification of the products of structural analysis research will end here.

Assumptions—Items one and two below are assumptions made regarding adequate use of the structural analysis approach while items three and four seem to be assumptions of the method itself.

1) The researcher has an adequate and accurate understanding of the philosophical system he is using as a source.
2) The researcher has adequate competency in the use of deductive reasoning and in verifying the conclusions thereof.
3) That the analytic categories used are the most significant ones for education and physical education and that these categories have some necessary connection to the beliefs of the philosophic systems.
4) That the products of philosophical structural analysis will overcome inconsistent eclecticism in education and physical education.(15, p. 8)

Elements and Relationships—Although there is some flexibility of procedure in structural analysis, in general the elements of this type of research relate to each other primarily in a step-by-step sequence. Unless specific exception is noted in the following, it may be assumed that the order of discussion here represents the actual sequence of events in the process of structural analysis research. It is to be noted, however, that the appearance of a particular element of the process following one or more other elements does not mean that there is never need to refer from the latter element *back* to the prior elements.

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† Italics not in the original.

For economy of time and space only the implications approach will be discussed. The sequence of elements is:

1) Selection of the philosophic system;
2) Description of basic beliefs of the philosophic system;
3) Identification of recurring educational problems not specifically included in the structure of the philosophic system;
4) Deduction of implications of the philosophic system for the recurring educational problems;
5) Identification of the analytic categories to be used with respect to physical education;
6) Deduction of implications from educational philosophy for the identified analytic categories.

Selection of a philosophic system for use as a basis for structural analysis may be viewed in several ways. One strong controlling factor in selection has been recognition of what systematic philosophic statements exist. In general, structural analysis research has tended to limit its choices to philosophies which have organized statements of metaphysics, epistemology, logic, and axiology. In addition, the selection of basic philosophies has been condtioned by orientation toward ". . . the leading philosophical tendencies of the Western world. (The fact that no consideration is being given here to philosophical movements in the Orient reaffirms pointedly the narrow provincialism of a world that is . . . shrinking day by day.)"(38, p. 15) Beyond the factors of available systems and of cultural bias, the particular purpose of any researcher would operate strongly in any selection. It is possible, for instance, that a researcher may be interested solely in explicating the implications of one variation of general philosophy.† In Zeigler's work the purpose was ". . . to help the reader understand the philosophical foundations underlying physical, health, and recreation education in the Western world."(38, p. vii) Summarizing then, selection of a philosophy is conditioned by existence of systems, cultural heritage, and the purpose of the researcher.

Description of basic beliefs of the selected philosophic system involves several related operations. First, is a survey of the writings of educational philosophers about that system, second is a choice of what has been said about the system within the categories relevant to the research problem, and third is the organization of the chosen material into a concise description of the basic beliefs of the selected philosophy within the relevant categories. Zeigler appears to survey three major types of writings. One is material by a single author about one philosophy, another is collected writings, such as yearbooks, where several writers deal with one philosophy each, and the third is surveys of several philosophies by one writer. Zeigler follows a pattern of describing the beliefs of naive naturalism, experimentalism, realism and idealism in metaphysics, epistemology, logic, and axiology. Within these descriptions, he appears to identify consensus of belief among educational philosophers in regard to a particular philosophy and, also, to indicate points upon which divergent emphases are evident within a given philosophic system.(38 pp. 45–48, 69–78, 118–121, 169–180)

Identification of recurring educational problems seems conditioned by two factors. One is specification of areas of decision which are implicit necessities in formal education and the other is acceptance of categories frequently used in educational philosophy. Some areas of recurring decision making in education are determination of aims and objectives, the relationship of school and society, the selection and organization of subject matter, and the utilization of method. Identifying such categories, or variations thereof, operates to direct the attention of the structural analysis researcher to the relevant points made in the philosophic system. In addition to such "generic" categories, differing combinations and/or extensions of these categories which have been treated by educational philosophers are available. For example, Brubacher has a section on "Curriculum"(4, part 3) and one on "Method"(4, part 4) while Hansen(12, chapt. X) deals with both curriculum and method in "Ways and Means in Education." As a variation in the logic of identifying recurring educational problems it is conceivable that some greater or lesser emphasis might be placed on certain categories in accord with the philosophical system used as the source.† For instance experimentalism seems to place relatively greater emphasis upon method while realism concentrates more on subject matter. Zeigler chose to use the same system of categories as he explicated the implications of naive naturalism; experimentalism, realism, and idealism in the categories of: society, school and the individual; educational aims and objectives; and the process of education.(35, chapts. 4, 6, 8, 10)

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† As one example of this see Cavanaugh, Patric L. "A Delineation of Moderate Realism and Physical Education," Doctoral Dissertation, University of Michigan, 1967.

Deduction of implications of the philosophic system for the recurring educational problems seems to involve two kinds of operations. One operation is stating propositions which the researcher himself offers as being the logical consequents of a given philosophic antecedent. This is to say, what logical consequences of a given philosophical position for, say, determining educational aims and objectives, does the researcher himself propose independently of those offered by other researchers in the same category? The second operation is the critical examination of various propositions developed by several other researchers with respect to the implications of given portions of a particular philosophy for the same analytic category. This might involve, for instance, examining what several educational philosophers have said in regard to the implications of the experimentalist epistemology for the utilization of method. Such critical examination could be the source of either acceptance or rejection of any one particular stated implication on the part of the researcher.

Identification of analytic categories with respect to physical education also has two distinct operations. One operation involves designating categories for physical education which are logical analogues of those used for education. In this, variances of the "generic" categories suggested for education seem appropriate. In Zeigler's work,(35) two categories for physical education are used, namely, "aims and objectives" and "methodology." In a general way the concerns appearing under aims and objectives in physical education are the analogues of those under "society, school and the individual" and "educational aims and objectives" in the treatment of education. Also, roughly, what is discussed under methodology in physical education is the analogue of what appears under "the process of education" for education.

The other operation in identifying analytic categories involves the stating of more specific sub-concepts which are of direct significance to physical education. In his discussions under naive naturalism, experimentalism, realism, and idealism in physical education, Zeigler deals with content which might be clustered into sub-categories such as: concept and importance of physical fitness; status in the school curriculum; goal emphasis; priorities of sub-programs in physical education; role of athletics; concepts of play and leisure; esthetics; relation of aim and method; relation of interest and effort; emphasis in teaching method; role of the teacher; and style of administration.(35, chapts. 5, 7, 9, 11)

Deduction of implications from educational philosophy for the physical education analytic categories also involves two operations. One of these is the analytic examination of a given educational philosophy for implied emphases with regard to the physical education analytic categories. For instance, in one place Zeigler says:

> There is an element of uncertainty with a considerable measure of contingency when an experimental problem-solving approach is employed in the teaching of a class. . . . Presented with a problem the student, guided by the teacher, searches for ways and

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† Variation in categories used between differing philosophies would, of course, markedly reduce the potential use of the products of structural analysis for further comparative analysis.

> means to solve it. If the teacher steps in with *his* answer or *an* answer too soon, it is obvious that the student will probably relax his own effort to consider all possible solutions.(38, p. 103)

This statement, appearing within the analytic category "methodology" and in the chapter on "Experimentalism in Physical . . . Education," appears to be a deduction from the more general quote below. That statement, which appears under the category "process of education" in the chapter "Experimentalism in Philosophy and Education," is:

> The activity theory of learning is an important contribution of experimentalism. This theory emphasizes that true learning is an active and not a passive matter. . . . The child learns when he gets first-hand, active experience in that which he wishes to accomplish. By experimenting with various hypotheses, we can learn through verification of the correct approach to the problem.(38, p. 84)

The second kind of operation in deducing implications involves critical examination of physical education literature for points of correspondence with the position of an educational philosophy in a particular analytic category. For instance, Zeigler in the category "educational aims and objectives" in the chapter "Idealism in Philosophy and Education" says:

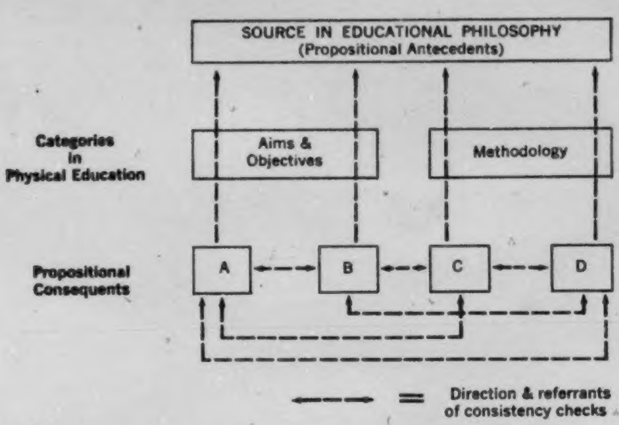
> Idealistic philosophy of education stresses that the developing organism becomes what it latently is. All education may be said to have a religious significance, which means that there is a "moral imperative" on education. . . .
>
> The idealistic view urges very strongly that personality has ultimate worth.(38, p. [illegible])

Later, Zeigler discusses Oberteuffer's views under "aims and objectives" in the chapter "Idealism in Physical . . . Education." It would appear that the points expressed were, at least partially, selected because of their correspondence to the positions of the idealist mentioned in the above quote. Zeigler expresses Oberteuffer as follows:

> He discussed the matter of the individual's interests and the moral imperative which is part of idealistic philosophy. Decrying twentieth century exploitation of the college athlete, he indicated that we cannot be "satisfied with scores instead of character," and that we should leave competitive sport to a large degree in the hands of the boys. It is sportsmanship and ethical choice that are important. . . . As Oberteuffer concludes, "self-activity leading to self-development involving the total self is to the idealist the important thing."(38, p. 218)

In addition to the "process elements" involved in philosophic structural analysis there is a kind of interlaced consistency question which the researcher finds himself asking regularly. For example, is a proposition stated under the category of methodology consistent with propositions which have been stated previously under the category of aims and objectives? Also, is that same proposition consistent with other statements made within the same category? In asking such questions regularly, the researcher is cross-checking the consistency of stated implications between categories of the same level of generalization.

In this way, the researcher has two kinds of operational consistency checks. The first deals with deductive consistency and examines whether or not the more specific proposition is the logical consequent of the more general proposition of its educational antecedent. The second deals with horizontal consistency and is concerned with whether or not the several more specific propositions of the consequents support or deny each other. Schematically, the dual consistency operation may be diagrammed as follows:


SOURCE IN EDUCATIONAL PHILOSOPHY
(Propositional Antecedents)
Categories in Physical Education
Aims & Objectives
Methodology
Propositional Consequents
A
B
C
D
= Direction & referrants of consistency checks

Phenomenology

A third kind of philosophical research which has been of interest to physical educators is phenomenology. Although the literature of physical education, until recently, has not specifically mentioned phenomenological research, it appears evident that a definite heightened interest in phenomenological method is appearing in physical education. This growing interest can probably be attributed to two major causes. One, certain graduate professors have been able to spark an interest in the method in some very competent graduate students. In several instances, this interest has led these students to undertake some disciplined study in phenomenology. Probably the second reason for the increased interest in phenomenology by physical educators is the fact that several important phenomenologists have had directly provocative things to say, particularly about such themes as "human consciousness body."

Although more and more persons in and/or associated with physical education are now using the term phenomenology in their research efforts, it seems to be coming clear that what the term means is quite different to these persons.† Be that as it may, "In whatever context the term phenomenology is used, however, it refers back to the distinction introduced by Kant between the *phenomenon* or appearance of reality in consciousness, and the *noumenon*, or being of reality itself."(16, p. 2) Despite apparent differences among those researching phenomena of interest to physical education, the instance of declared phenomenological research which seems to be the fullest exposition readily available is Sheets' *The Phenomenology of Dance.*(30) This source will be the case study for this discussion.

Focus—The focus of phenomenological research is radically different from any other method. Phenomenological research attempts to investigate consciousness, however, not consciousness as a psychic function but the kind of consciousness in which things are known. The idea of consciousness ". . . is best expressed by . . . the kind of being which an object of knowledge has in being known."(16, p. 9) In differentiating phenomenology from other methodological approaches, Sheets says:

> Instead of reflecting upon experience as the objective relationship of man to the world, the phenomenologist seeks the heart of

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† "Most descriptions of the phenomenological method contained in the current literature are rather simplistic and inadequate. All too often the phenomenon to be described is assumed to be an immediate datum and the laborious road of reduction is neglected. Authors appear to think that the knowable is, according to phenomenology, readily available for inquiry and forget that, according to phenomenology also, the inner core of our knowable world can be uncovered only in a laborious way." (14, p. 36)

> the experience itself: the immediate and direct consciousness of man in the face of the world. Instead of taking man and the world for granted, each of which is constituted apart from a relationship to the other, and assuming the reflected-upon experience to be the fundamental interaction of man with his environment, the phenomenologist's approach is rather to describe the foundation or structures of consciousness and the foundation or structuring of the world on the basis of that consciousness.(30, pp. 10-11)

Thus, it may be said in an oversimplified way, that the focus of inquiry of the phenomenologist is not upon the object per se not the subject per se but upon the consciousness of the object as it is experienced by the subject. The phenomenologist chooses to focus on consciousness because to him inquiry into the world of empirical individual existents presupposes existence as such while the phenomenologist wishes to presuppose nothing.

> This world of Reality as sensed . . . must not be accepted as our certain evidence for inspection because this world of Reality is dependent, contingent and dubitable. . . .
>
> The phenomenological way to "see" requires . . . a descriptive inspection of the realm of *Consciousness*, as examination of Consciousness provides evidence that is necessary, absolute and indubitable.(11, p. 3)

In Sheets' work the focus of inquiry is expressed in:

> To approach dance as a phenomenal presence is to presuppose nothing in advance of the immediate experience of dance. Because nothing is taken for granted, dance is looked upon as a totality whose structures are intrinsic to it. To discover just what this global phenomenon is, constitutes the main project of this book. (30, p. 8)

Product—The products of phenomenological research are descriptions of essences. This means that phenomenology produces knowledge which is scientific in the Husserlian sense that philosophy must be a "strict" science as distinguished from "exact" sciences such as mathematics.(16, p. 17) "Particular sciences are concerned with *how* things *act*, but only one science is concerned with *what* things *are*; it is universal because all other sciences can learn from it and only from it *what* their objects *are*."(16, p. 18) The phenomenologist describes the "whatness" of that which is given in consciousness. It is not a particular instance of a universal which a phenomenologist describes, such as this or that particular dance, but the essence of the universal, such as dance per se.

> To discover the essence of dance, one must go back repeatedly to the global phenomenon itself, to the indivisible wholeness of any created form.(30, p. 8)

Description of essences does not mean that the "whatness" of that which is given in consciousness is depicted in a fixed, minutely vivid collection of small particularities, rather, it means the description of essences produces ". . . knowledge of essences *as they are*, which is to say non-fixed, morphological essences, which can be described in terms of 'types,' though not in terms of exactly determinable 'classes.' " (16, p. 15) Sheets attempts to make some important differentiations with respect to phenomenological description and other kinds of study of dance.

> What is dance? has certainly been answered before from an historical, scientific, and educational point of view. The concern here, however, is not with the series of events called dance which have occurred through the ages, with the series of events which are the objective correlates of a moving body, nor with the ways in which dance as part of an educational curriculum meets educational standards. The focal point of concern here is precisely that

> elusive moving form which is created and appears before us on the stage: the dance as both a formed and performed art.(30, p. 14)

The statement above needs discussion. When an historian deals with the question What is dance?, he is concerned with the series of particular events which have occurred in man's past within selected times and places and within chosen socio-cultural contexts. Thus, his answer to the question what is dance? is phrased in terms of its chronological appearances in specific geographic locations and its roles and functions for the groups of people involved with it. In other words, the historian describes dance in relationship to externally derived categories such as a time, a place, and a culture. Essentially, this approach means that dance is described *in terms of something other than dance itself.*

The phenomenologist deals with the question what is dance? differently. To him, the question means what is dance in itself? Thus, his answers to the question are descriptions of the essences of dance or those ". . . *structures* apparent in the phenomenon, forms existing within the total form of life." (30, p. 12) The phenomenologist's answer to the question is an attempt *to describe it in terms of its own necessary structures* rather than in terms of some pre-conceived set of externally derived categories. Further, the phenomenological description of essences aims at revealing the structures which are essential to any particular manifestation of dance. Logically, the phenomenological form says:

dance is = certain structures always are.

Logically, the historical form says:

dance is = particular, diverse manifestations have appeared at definite times and places in defined cultural relationships.

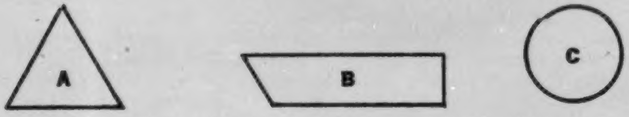
To illustrate, when dance is, structured time always is. Sheets describes the essence of the time of dance:

> A dance, as it is formed and performed, is experienced by the dancer as a perpetually moving form, a unity of sucession whose moments cannot be measured: its past has been created, its present is created, its future awaits creation. Yet, it is not an externally related series of pasts, presents, futures—befores, nows, and afters; it is truly *ekstatic*, it is in flight, it is in the process of becoming the dance which it is, yet it is never the dance at any moment. The dance at any moment is diasporatic, a perpetually moving form whose "moments" are all of a piece.(30, pp. 21-22)

Phenomenological method attempts to produce descriptions of essences. Since its products are not the offspring of a theoretical structure, such as the research results developed from hypotheses suggested by a scientific theory, these products themselves do not form a theory. "No actual theory emerges from phenomenology because phenomenology is concerned not with theories about phenomena, but with descriptions of their existence. . . ." (30, p. 11)

> Now, it should be obvious that philosophy conceived in this way cannot by any means be a "system." In so far as it is guided by a unity of aim and method it can be called "systematic," but since it must examine "things" one by one in order to determine their essences, it cannot have the organic unity of a system which grows out of one fundamental principle. Rather, its unity is, as Husserl himself expresses it, the unity of a well-built edifice, wherein one solid stone is placed on another.[16] The knowledge of one essence cannot be derived from the knowledge of another; each must be examined by itself and completely verified in itself.(16, p. 16)

These products are fundamentally different than those of theory building and structural analysis. In both theory building and structural analysis, the sense of propositions A and B and C is at least partially derived from the relationships prescribed between A and B and C by the theoretical structure itself. This means that A means A, but, also, A means it is related in this particular way to B and in that particular way to C. By contrast, if phenomenological research produced statements of the essence of A, the essence of B, and the essence of C and if these differing essences were symbolically pictured as



then any arbitrary spatial arrangement of these symbols in relation to each other would be as truthful to the relationships of A and B and C as any other relationship. This appears to be the case up to the point where it is realized that the phenomenologist still may set out to inspect the *essence of the relationships* between A and B and C.(18, pp. 38-40) We may conclude with respect to the products of phenomenological research that ". . . the edifice can never be considered complete; it requires the tireless efforts of generations of scholars all imbued with the same conviction, who will discover one by one the essences of those things about which men have been talking since the beginning of time." (18, p. 15)

Verification—To discuss verification of the products of phenomenological research is most difficult. This is true because the description of essences, in the theory of phenomenological method, is self verifying. The entire theory of phenomenology denies that validating any knowledge product is achieved by using any criterion which exists outside of the knowledge act itself.

> We do not guarantee an act of knowledge by demonstrating that it corresponds with reality; we guarantee reality by demonstrating that it is the object of an act of knowledge. If we define knowledge as an act which has reality as its object, then if we prove that an act is one of knowledge we have thereby also proved that its object is real.(18, p. 41)

To understand "verification" of the products of phenomenological description necessitates some investigation of the objective and the subjective. Perhaps a beginning point is:

> . . . Husserl was saying that an act of consciousness and its object are inseparable . . . , they are but the subjective and objective aspects of the same thing.(18, p. 17)

That "same thing" in the above quote would seem to be something which we will call knowledge of essences. Thus, referring again to the quote, the act of consciousness is the subjective aspect and the object of the act of consciousness is the objective aspect of knowledge of essences. But, please note, these "aspects" are inseparable, which means that knowledge of essences does not appear without both an act of consciousness and an object of that act of consciousness. A particular act of consciousness and the object of that same act are both *within* the structure of consciousness for ". . . it is the essential structure of consciousness to be the *consciousness of something.*" (11, p. 6) Therefore, knowledge of essences is available within consciousness which itself necessarily encompasses the so-called objective and subjective.

To say, however, that knowledge of essences is available within consciousness does not mean that any essence is "seen" clearly by a person who is conscious. On the contrary!

> It is precisely the transformation of this object of pre-reflexive consciousness which brings into strong light the importance of reflexion as a phenomenological instrument. If an experience remains only an experience . . . it is inadequate to scientific [in Husserl's sense] knowledge. In perception, for example, the perceived

> is the object of a vital experience; it is *given* as this experience, but it is *absolutely* given only to the extent that the experience of perception is itself absolutely given. Thus, to determine that the experience in question is genuinely perception and, hence, that its object is genuinely real, the experience must be made the object of a theoretical examination. Only in this way is the perceived given, as genuinely perceived. Now, clearly, to examine the perception precisely as perception is the work of reflexion.(18, p. 99, bracketed material supplied)

The import of this point is that "naive" consciousness does not *declare* itself as knowledge of an essence but has within itself the objectivity which is knowledge of an essence. In effect, the objectivity which is knowledge of an essence awaits within pre-reflexive consciousness to be *dis-covered* by reflexion. For:

> If consciousness is by definition consciousness—of something, and if reflexion is consciousness of consciousness, then prior to any reflexion there must be a consciousness of something. Thus, even though phenomenology properly so-called begins with reflexion, the objectivity with which it is concerned is present in consciousness prior to reflexion, and if objectivity is to be understood, pre-reflexive consciousness must be understood as that wherein objectivity first resides. It is not the function of phenomenology to constitute an objectivity different from that which "naive" consciousness intends; rather, its function is to "clarify" what has already been naively intended by constituting and thus guaranteeing it in phenomenological intuition. . . . Thus, when Husserl speaks of a . . . "reconstitution" of reality he does not mean an operation which is independent of the *original* consciousness in which objectivity is first presented. On the contrary, he means precisely the revelation that the original pre-reflexive consciousness has been a valid constitution of objectivity. (18, pp. 58–59)

A brief description of the structures of "hereness" and "thereness" in the experience of space will illustrate how reflection discovers the essence which is already there in the pre-reflective consciousness.

> We may illustrate the lived experience of spatiality in-the-midst-of-the-world in the common, everyday movement of reaching. If I reach for a pen which is on the table, it is because I am pre-reflectively aware of my spatial presence in relation to the pen. My immediate "hereness" carries with it a correlative notion of "thereness." Because I apprehend my body in the environment as a spatial presence, I intuitively know the spatial presence and meaning of things in my environment. Its "thereness" exists for me only because my "hereness" exists for me.(20, p. 24)

Note that knowledge of the essence of "hereness" and "thereness" is there in the act of reaching for the pen, that is, I would not reach for the pen if I did not know that I am here and that it is there. More briefly, this knowledge is *implicit* in the act of reaching. However, note also that the description in the quote above is a product of phenomenological reflection upon consciousness of experience of reaching. Further, it should be clear that the essence of spatial "hereness" and "thereness" which is implicit in reaching is now clarified by the reflection. This is to say, what was implicit is now explicit.

With this background it may be stated that the phenomenologist considers the products of phenomenological method to be ". . . *objectively valid results* . . . for the man who correctly takes up the phenomenological standpoint. . . ."(10, p. 34) Further, the same results will occur for those who occupy the same standpoint and, this being the case, a philosopher's results ". . . could be tested and verified by any other philosopher looking from the same position. . . ." (10, p. 20) Nonetheless, it should be clear at this point, that phenomenologists expend little effort in attempting to "prove" their results. Instead, literature dealing with phenomenological method directs its efforts toward validating the *method* as the source of secure knowledge rather than concerning itself with verifying any particular results. This itself is indicative of the idea that the results of phenomenological research which employs the method accurately will contain knowledge of essences to which persons may assent. For, ". . . phenomenological method, after all, is not one of "proof"; rather, it is one of description, wherein it is hoped that others will see things the same way—knowing subjectively that they are wrong if they do not." (38, p. [illegible])

Assumptions—It is important to be clear that in discussing assumptions here we are not speaking of assumptions of the phenomenological method per se but assumptions of any particular philosophic research which uses phenomenological method. This is important with respect to phenomenological research since phenomenology wishes ". . . not to utilize in its investigation any proposition which presupposes anything to be known about the world." (10, p. 17) The assumptions are:

1) That the researcher understands phenomenological method;
2) That the researcher has experienced† the object of inquiry which he sets out to examine.

Elements and Relationships—Although it is possible to talk about step-by-step logical procedures in phenomenological method, it is unlikely that such procedures follow one upon the other like one layer upon another in a layer cake. In process, the relationships of elements in phenomenological research might be better likened to the diffuse interpenetration but, nonetheless, distinctness of character of the different batters in a marble cake. Such is understood in what follows.

Husserl considered phenomenology to be a "science of essences" by which he intended two things: ". . . first, that it is a science whose objects in no way depend on mental construction; and secondly, that it is one in which the essences known are in no way dependent on the concrete, factual realization of these essences." (38, p. 40) Phrased in another way, phenomenology produces knowledge of essences neither of which is "made-up" by the phenomenological researcher out of his own peculiarities nor which depends upon empirical embodiment in reality. Still further, phenomenological method ". . . bypasses all question of the subject's objectivity or the object's subjectivity by elucidating the immediate world of lived experience. . . ." (38, p. 18) Accordingly, it was Husserl's intent to develop a method whereby the subject-object split, which had plagued philosophy for centuries, might be overcome.

Before discussion of elements it must be clarified as to what precedes phenomenological method. What must be as a basis for phenomenological method is experience. Experience here means the object of a particular phenomenological research must *be with* an act of consciousness by the researcher. This is to say, the act of consciousness itself must be "lived" by the researcher not ". . . objectified in the way *things* can be objectified. . . ." (10, p. 20) For example, if a researcher sets out to examine dance phenomenologically, he could experience many different kinds of acts of consciousness. He could live the experience of *anticipating* dance, the experience of *imagining* dance, the experience of *perceiving* dance and so on through a series of differing acts. The point is that before phenomenological reflection begins the researcher must experience an act of consciousness of his object of inquiry so that he may examine the essence of that object as it is given to him in the act of consciousness. With this background it is now possible to discuss the processes which are employed in phenomenological method to produce descriptions of essences. The four elements of phenomenological method are:

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† It is to be emphasized that experience to the phenomenologist does not mean, simply, sense perception.

1) The epoché,
2) The reductions,
3) Ideation,
4) The essential intuition.

The first element is called the epoché and amounts to a suspension of any position arising from factual existence of the object of inquiry. The phenomenologist brackets all the factually existing particulars about his object of inquiry so that he uses no such information in his quest to clarify the phenomenon. Refusal to use such information is derived from the phenomenological goal of not employing any proposition in research which presupposes any knowledge of the world.(16, p. 17) To accept factually existing particulars is to presuppose their existence as knowledge. The epoché is maintained throughout phenomenological research without denying existence as such but only refusing to consider it within the research.(16, p. 60) Sheets illustrates the bracketing of such information from her research as follows:

> What is dance? has certainly been answered before from an historical, scientific, and educational point of view. The concern here, however, is not with the series of events called dance which have occurred through the ages, with the series of events which are the objective correlates of a moving body, nor with the ways in which dance as part of an educational curriculum meets educational standards.(38, p. 14)

And, further:

> It may be noted that the empirical answer which is sometimes given to the question, What is dance? namely, that dance is force in time and space, is not descriptive of the *lived experience* of dance.(38, p. 14)

Stated as summary, Sheets is saying that she is suspending from her study any information *about* dance supplied by describing dance in terms supplied by historical, scientific, or educational categories.

The epoché operates as a negative condition to clear away some factors which prevent the researcher from inspecting consciousness, ". . . it says nothing positive with regard to what is there." Since the epoché itself cannot tell the researcher anything positive of the essences he seeks, what is needed is an element which will be a positive counterpart in grasping these essences.(16, p. 60) This positive counterpart is provided by the second element called the reductions. There are six reductions(16, p. 60-63) which operate to exploit ". . . the positive residue left after the epoché has been accomplished." (16, p. 60) It may be said that the reductions serve to purify the consciousness which was previously brought to inspection via the epoché. These two elements, both operations to clarify the phenomenon, may be interpreted in this way: if the epoché clears away debris by negating knowledge derived from factual existence of the object of inquiry, the reductions allow the remaining consciousness to be uncontaminated by internal factors which prevent pure consciousness appearing. Together, the epoché and the reductions become a kind of total suspension of factors which prevent pure consciousness from displaying the essences clearly.

> Included in the suspension are the following: 1) the entire world as viewed from the natural standpoint, 2) one's own human "I" or empirical subjectivity, 3) all sciences which have to do with and whose results depend upon the acceptance of the natural world, or which concern the actual presence of you as an individual human being.(16, p. 60)

If the epoché allows the researcher to "see" the consciousness wherein essences appear, the reductions allow the researcher to "see" the essences appearing in consciousness. Both operations are an attempt to sort out and remove biases of either the so-called "objective" or the "subjective" variety so that object of inquiry may appear to the "gaze" of the researcher in its totality rather than from some predisposing perspective. Sheets, for example, in suspending information about dance which describes it in terms of "a force in time and space" emphasizes the need for a unified view:

> When we see dance, we do not see separate objective factors with no unifying center. What we see is something which perhaps can only be empirically written as forcetimespace; an indivisible wholeness appears before us. Space, time, and force are certainly apparent in dance, but they are not and cannot be objectively apparent. To conceive of them as given objective factors beforehand is to overlook the very quiddity of dance: it is something which is created and which does not exist prior to its creation.(30, p. 14)

After the epoché and the reductions have assured that only the object of inquiry (the phenomenon) will be inspected the third element of phenomenological research appears. "The epoché and the reductions insure that only phenomena will enter into the consideration, but of themselves they give no assurance that there will be a penetration of these phenomena to the very essences contained in them." (16, p. 60) Now the researcher can "gaze" at the original phenomenon in its pure givenness, that is, unclouded, and examine it carefully and meticulously to see it as it is. Upon disclosure of the phenomenon as it is, the researcher may now use the process of ideation.

> This original appearance serves merely as an "example" upon which the process of *ideation* can be built. The process itself consists in submitting the original perception or imagination to a series of "free" variations, wherein the object is viewed from various "aspects" (perceptual and imaginative). In this process of variations the possibilities are, so to speak, infinite, but it is not necessary to go through the infinite variety of possible aspects of the object; somewhere along the line it will be "seen" that there is an identical element underlying all variations, actual as well as possible. This identical element is the "sense" or essence of the object under investigation.(16, pp. 59-60)

Metaphorically, the process of ideation may be expressed as meaning "seeing" the essence given in the original appearance as intended in several differing acts of consciousness. For example, if as Sheets states, following Susanne Langer, that dance is described ". . . as creating and presenting an *illusion of force* through a symbolic form," (30, p. 30) this original appearance of dance can then be examined by the process of ideation. This is to say, that dance as the object of consciousness can be seen as it is experienced in such acts of consciousness as imagining dance, remembering dance, perceiving dance, and so on. If "seeing" dance as the object in differing acts of consciousness produces the identical underlying element that dance is an illusion of force, then "This identical element is the 'sense' or essence of the object under investigation." (16, p. 60) To clarify more specifically, if in examining dance as experienced in many differing acts of consciousness the element of illusion of force is constant in all acts, then illusion of force *is* an essence of dance.

> Lest there be doubt as to the justification for calling the result of this process [ideation] the essence sought for, Husserl simply defines essence as that which remains identical in all possible variations of that which is being investigated. This also has the advantage of assuring the objective validity of the knowledge resulting from the process, since objective validity, too, is defined

> as the constant and universal identity of intention in an act of consciousness.(16, p. [illegible], bracketed material supplied)

In the first three elements of phenomenological research, namely the epoché, the reductions, and ideation, the researcher has cleared away all factors which contaminate the appearance of the phenomenon as it is and, then, has phenomenologically "seen"† the essences in the phenomenon. Being phenomenologically in the presence of these essences, it is now possible for the researcher to record what they are carefully and accurately. In other words, the "things" as they are may be described. As an illustrative example, Sheets describes some essences, such as form, time and space, and how these essences are structured in the essence of dance, namely, illusion of force.

> The sheer form-in-the-making which dance is exists within the totally differentiated modality of the illusion. Its spatiality and temporality are neither secondary illusions nor external supportive devices; rather, they are intrinsic structures which allow the primary illusion to be sustained. Space and time are created and uniquely created with each dance: as the form-in-the-making reveals itself as an illusion of force, it reveals itself as a highly individualized illusion.(30, p. 48)

Even though the description of essences is the desired product of phenomenological research and even if such description is actually accomplished by the researcher, its actuality has not completed the process of phenomenological research. There is one more element of the process which needs identification. That element is called the essential intuition. The essential intuition is the sure knowledge that the essence of what is known is known necessarily and essentially and, also, that it is "seen" ". . . that no one else can justifiably see it any other way." (16, p. 60) Essential intuition goes deeper than knowing the essence of the object of inquiry into the affirmation that the essences of the events, processes, and intuitions themselves are also "seen." (16, p. 61) The essential intuition is "seeing" that knowledge of essences is self evident in all ways and that what is grasped is necessarily true.(10, p. 35) The essential intuition is *not* to be thought of as ". . . an irrational leap beyond the data of experience. Rather it is intended as a rational penetration *into* the data of experience; and for this every element of the laborious process is necessary." (16, p. 60)

> *Epoché*, reductions, ideation, and essential intuition are not four successive techniques applied in an attempt to purify knowledge and thus render it certain. They are simply four interdependent factors in an over-all process known as "intentional constitution," which at one and the same time renders knowledge completely immanent and hence capable of verification, and completely necessary for subjectivity as such, which gives it universal objective validity. The ultimate aim of all phenomenological method is an intuition of essence; but intuition is not to be conceived as a lyric leap into the unknown but rather as the term of a perfectly controlled process, which justifies itself from beginning to end.(16, p. 60)

SUMMARY AND SUGGESTIONS

This paper has attempted to examine existing types of philosophic research which have been used in studying the phenomena of interest of physical education. The approach used in this task allows a comparison of these types of research according to certain commonalities. The following chart summarizes the analysis of the three types of research.

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† Again, the phenomenologist does not mean a sense experience to be described as the eye sensing and transmitting externally produced stimuli.

TYPE	FOCUS	PRODUCTS	VERIFICATION	ELEMENTS
THEORY BUILDING	Examination of particular interest in accord with a source philosophy.	A stated theory of explanation of particular interest in terms of source philosophy.	Logical relations of terms in theory. Validity of terms in theory according to structure of source philosophy. Consistency of theory with data from other sources. Power of theory to explain all instances within area of particular interest.	Choosing phenomenon of interest. Identifying particular facet of phenomenon of interest. Selecting, describing and explaining source philosophy. Relating philosophy to phenomenon of interest. Relating phenomenon of interest to philosophy. Discussing and explaining set of terms of theory. Stating the theory.
STRUCTURAL ANALYSIS	Deductive consequents of philosophic systems for physical education.	Structured set of statements of philosophic emphases in analytic categories.	Deductive consistency of consequents in physical education with antecedents in education and philosophy. Empirical and scientific support for stated deductive consequents. Evidence in support of the premises which produce the deductive consequents.	Selection of philosophic system(s). Description of beliefs of philosophic system(s). Identification of recurring educational problems. Deduction of implications for educational problems. Identification of analytic categories for physical education. Deduction of implications for physical education analytic categories.
PHENOMENOLOGY	Consciousness.	Description of essences.	Denies validity of external verification for objective knowledge. Correct adoption of phenomenological standpoint assures objective results. Results of one research may be verified by another researcher adopting same standpoint.	Epoché Reductions Ideation Essential intuition

Suggestions

The points offered here are conceived as "things which ought to be done" to improve philosophical research in the phenomena of interest of physical education. They appear here in no special order.

1) We need to develop *programs* of study at the graduate level which produce specialists in the philosophical aspects of physical education who have contact with the diversity of philosophical positions now existing and who have at least one special area of competency in depth. Diversity and depth are meant to apply to both the substantive content of philosophic materials and the methodological aspect of philosophic research.
2) Our programs of study need to include direct, concentrated attention (as distinct from incidental) to philosophic research method. To this end, experiences which involve students in doing philosophic research are absolutely essential.
3) College professors who teach the "foundations," "principles," "philosophy" and "theory" of courses need to have reasonably concentrated and disciplined study of available content in physical education, educational philosophy, and philosophy.
4) Major graduate centers which have, or propose, concentrated programs in the philosophic aspects of physical education should attempt to select faculty specialists in the area who represent a diversity of viewpoints.
5) Regular, more specialized opportunities for interaction among persons specializing in the philosophic aspects of the field need to be developed. Regular symposia and/or regular publications are needed.
6) Introduction to the substance of adequate philosophic research needs to be achieved with undergraduate students.

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Zeigler's Reaction to "Theory and Design of Philosophic Research in Physical Education"

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Introduction

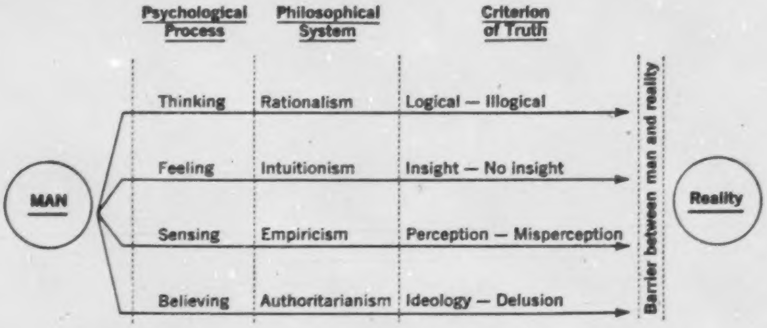
It was a joyful and exhilarating experience for me to read Professor Fraleigh's assessment of philosophic research in physical education, and then to be given an opportunity to react to it publicly is like being asked to "spread my own favorite frosting on my late grandmother's exceedingly tasty, homemade cake." Fraleigh's assessment is excellent; the paper is exceptionally well organized; and one must be impressed with his intellectual honesty. Having said these nice things—remarks honestly made, I trust—I will now proceed to make a few opening statements, and then I will make a series of very brief comments in the limited time available.

But before doing this, it would be remiss of me not to pay tribute to the continuing contribution of Eleanor Metheny to philosophic endeavor in this field. Her early work—over a quarter of a century ago—with "body dynamics" and the course that she instituted, and the subsequent development of theory relative to human-movement kinesthesia, have been strong influences on what I feel to be the direction that physical education is taking in the latter third of this century. Still further, her presence here at a men's meeting is indicative of the fact that any disciplinary effort in this field will be continually hampered if men and women don't join forces in *all* of our professional associations and in our schools and colleges at all levels.

Some General Observations

Initially, the question of knowledge and how it is obtained by man, must be considered briefly. When an investigator undertakes research, this means usually that he might turn up some newly discovered facts. What conclusions may be drawn from these facts is another matter. Quite often when the word "research" is used, and this is usually the case with philosophical investigation, the investigator means that he will be studying the question at hand carefully, critically, and exhaustively in the hope that he might be able to state new or revised conclusions about a problem at hand. The historian attempts to re-create the past accurately; the descriptive researcher tries to describe present status correctly; and the experimental group-method investigator employs a control group in his study, and thus he is in a much better position to say that *new* facts have been obtained. None of these investigators can escape a value orientation wholly, but the philosophical "researcher" usually doesn't even try to do so.

Recently, I have been proceeding on the basis of a very helpful little diagram devised by J. R. Royce which indicates that there have been four paths to knowledge rather generally accepted by man throughout history.[1] A brief examination shows us that the various ways of "doing philosophy," as explained by Fraleigh, use one or more of these psychological processes and to different degrees:


Psychological Process
Philosophical System
Criterion of Truth
Thinking
Rationalism
Logical — Illogical
Feeling
Intuitionism
Insight — No insight
MAN
Sensing
Empiricism
Perception — Misperception
Believing
Authoritarianism
Ideology — Delusion
Barrier between man and reality
Reality

The third point under "general observations" is the suggestion that a categorization of philosophical endeavor offered by Frankena might help to put physical education philosophizing in perspective. He suggests that the philosopher may approach his work *speculatively, normatively,* or *analytically.*[2] Thus, the investigator may *speculate* about what we know and believe about the earth and the universe, as well as human affairs within this framework. Secondly, man and his social life in relation to his environment may be approached *normatively* in an effort to evolve a systematic and coherent plan of living. If the philosopher carries out his work *analytically*, he may seek to analyze other philosophical approaches critically and to make comparisons. He may concentrate on the clarification of concepts through conceptual analysis, and to present evidence that seems to bear out some position, belief, or another. Finally, he may go so far with critical analysis that he will decide that ordinary language philosophy should be his primary task. With an analytic approach, therefore, philosophy becomes a sort of logico-linguistic analysis—and not a set of scientific truths, *or* a description of essences of an experience, *or* some moral exhortations about the good life. What was—and still is—called "principles and philosophy" of physical education was philosophizing *normatively*. And the three types of investigation described by Fraleigh can be described as (1) analytic (theory building); (2) analytic, but based on earlier speculative and normative endeavor (structural analysis); and (3) analytic in a sense, *but* based on a new approach based on sensing, feeling, thinking, and believing—perhaps in that order of importance—and actually *philosophy in a new key*.

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[1] J. R. Royce, *The Encapsulated Man* (Princeton, N.J.: Van Nostrand, 1964).

[2] William K. Frankena, *Philosophy of Education* (New York: The Macmillan Company, 1965), pp. 10-11.

One last remark seems in order, and this is a quick report about a similar analysis to that of Professor Fraleigh made by Kathleen Pearson in 1968—but in regard to recently completed doctoral dissertations in *philosophy of education*. She concluded that they could all be classified under three categories roughly: (1) *construct analysis*, the total position developed by a philosopher or theorist; (2) *system analysis*, a philosophical or theoretical position supported by several people (often with relatively minor differences among them); (3) *conceptual analysis*, an idea contained within a construct, system, theory, or discipline. This analysis of twelve doctoral studies represents a meagre sample, of course, and it does point up certain disagreement over names for the various types of analysis. It is highly interesting to note, however, that philosophy of education—to this extent at any rate—is being influenced noticeably by the philosophical analysis movement in the "mother discipline."[3]

Specific Comments and Observations

The remaining part of this reactor paper will be devoted to very specific comments and observations about Fraleigh's paper. There are fifteen of them, and they are numbered chronologically as a result of my reading and re-reading of the assessment:

1) Fraleigh states, "we are vulnerable to the charge that 'anything goes' in philosophic research." *Response:* This is true to a certain degree, but I can't see how this will change because philosophizing is so personal and so value oriented—and because there seems to be no general agreement about "research" in the mother discipline.
2) Fraleigh states, "physical educators who wish to do philosophic research can be expected to be aware of alternatives. . . ." *Response:* It is certainly true that we should be able to expect this in the future, but I feel so strongly that the final decision about the type of philosophizing that he plans to undertake should come *only* after most careful self-analysis and examination. It should be "authentic" work.
3) Fraleigh states, "linguistic analysis, a fourth type, will not be included." *Response:* I feel that this was a wise decision, since I don't believe that

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[3] Kathleen Pearson, "An Analysis of Research in Educational Philosophy by Doctoral Candidates at Several American Universities, 1962-1965." Unpublished paper completed at the University of Illinois in the Graduate Department of Physical Education, 1968.

any physical education philosopher has carried out such work other than the late Peter Spencer-Kraus at Illinois. His study ("The Application of 'Linguistic Phenomenology' to the Philosophy of Physical Education and Sport") was completed for the master's degree in 1969 before his untimely death. Incidentally, I have now learned that Keating's work about "sport" versus "athletics" is not considered linguistic analysis per se by him. I have suggested the description, "a type of philosophical analysis —sort of conceptual analysis with a tinge of linguistic analysis."

4) Fraleigh has me puzzled when he states that (conversely!), "in the philosophical theory, verification is made by *rational* correspondence between the variety of observable manifestations of the phenomena of interest and whether the stated theory is capable of explaining all manifestations in ways consistent with the content of the theory." *Response:* Ellfeldt and Metheny themselves state that "the intent to attempt to validate this theory in subsequent papers is stated."[4] Granting the difficulty of defining the term "theory" adequately, it does seem that in both scientific and philosophical investigation we view a theory generally as "a set of assumptions from which a set of empirical laws (principles) may be derived. . . ."[5]

5) Before leaving the analysis of the work by Metheny and Ellfeldt, I would like to say in passing that I feel that this work may have enormous implications for the future of our field. I tried to express my personal allegiance to these indications of what physical education's central focus ought to be at St. Louis in 1968 in a paper entitled "The Idea of Physical Education in Modern Times."[6] Acceptance of this theory could have "revolutionary" implications for our educational system, as was recognized by Aldous Huxley in "The Education of an Amphibian" when he asserted that (1) "the psycho-physical instrument is one and indivisible . . ."; (2) "the most fundamental of our awarenesses is the kinesthetic sense"; and (3) that "the problem of incorporating a decent education in the non-verbal humanities into the current curriculum is a task for professional educators and administrators."[7]

6) Fraleigh refers to "the starting point for the persistent problems variation. . . ." To the best of my knowledge, this idea and a number of the problems came from the historical research of Dr. John S. Brubacher, formerly of Yale University and The University of Michigan.[8] We adapted this approach to physical education and sport by retaining those which seemed applicable and adding others that have loomed large in this field throughout history. Further, the "problems" have been subdivided into "social influences" and "professional problems." Thus, the attempt has been—*in this order*—to trace the *history* of the various persistent historical problems, to analyze the "problems" *philosophically* through the structural analysis technique, and next to evaluate them internationally on the basis of *comparative analysis.*

7) Fraleigh identifies eleven of the persistent problems. For the record I would like to mention the three that were omitted in the problems paperback for lack of space. They are (1) professional preparation; (2) physi-

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[4] Lois Ellfeldt and Eleanor Metheny, "Movement and Meaning: Development of a General Theory," *Research Quarterly*, 29 (October, 1958), 264-273.

[5] Daniel E. Griffiths, *Administrative Theory* (New York: Appleton-Century-Crofts, Inc., 1959), pp. 27-29.

[6] Earle F. Zeigler, "A Tale of Two Titles," *JOHPER*, 39 (May, 1968), 53.

[7] Aldous Huxley, "The Education of an Amphibian," in *Tomorrow and Tomorrow and Tomorrow* (New York: The New American Library, 1964), p. 17 and p. 31.

[8] John S. Brubacher, *A History of the Problems of Education* (New York: McGraw-Hill Book Company, 2nd Edition, 1966).

cal education and sport for women; and (3) the role of dance in physical education and sport.[9] And just last summer, while teaching at Sacramento State, Steve March suggested the inclusion of "Man and His Environment (Ecology)" as a fifteenth problem. Professor Brubacher feels that such addition seems logical, even though an "ersatz history" of the problem may have to be concocted.

8) Fraleigh discusses the "logic of the educational implication." I would like to add for your consideration the now "classic battle" on this issue by Sterling M. McMurrin of Utah and B. Othaniel Smith of Illinois in 1962 at the 59th Annual Meeting of the American Philosophical Association.[10] Both "sides score rather heavily" on the other.
9) Fraleigh presents the sequence of elements in the "implications approach." I would like to suggest that he include Step #7, which was followed to a degree by VanderZwaag with Essentialism and by me with Reconstructionism.[11] The attempt to gather scientific evidence in support of conflicting theories in education and its practice, for example, could well be the "saving grace" for structural analysis.
10) Fraleigh has analyzed the steps followed in the structural analysis technique exceptionally well, and his summary statement and diagram are most helpful. In line with Point #9 above, I believe that the suggested "external verification check" can be worked very nicely into his diagram.
11) Fraleigh discusses Husserl's methodological technique (as explained by Lauer) at considerable length. This is most helpful to someone who is pragmatically oriented, even though I have great difficulty understanding it or "feeling" it. *Question:* On page   , Fraleigh explains that phenomenological research will require "the tireless efforts of generations of scholars all imbued with the same conviction, who will discover one by one the essences of those things about which men have been talking since the beginning of time." My question is, "Will these scholars, or *must* they, be performers as well when they attempt to describe the essence of movement experience?" If not, how will they possibly be able to understand and explain others' feelings?
12) Fraleigh quotes Lauer as saying, ". . . phenomenological method, after all, is not one of 'proof'; rather, it is one of description, wherein it is *hoped* that others will see things the same way—knowing subjectively that they are wrong if they do not." *Response:* Would Dr. Fraleigh be averse to adding the following dependent clause to the above statement: "If the original 'describer' was correct in his description."
13) Despite the very fine analysis of phenomenological method by Fraleigh, I still have the feeling that it needs to be made more clear and less esoteric. And we can't forget either that there is significant disagreement among phenomenologists as to method and technique!
14) Fraleigh presents us with an excellent chart describing the three approaches. *Suggestion:* I would like to recommend that the "external verification step" be added under "Elements" in the right hand column. Also, I think that the description of Phenomenology can and should be expanded somewhat in the space that is available on the chart.

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[9] Earle F. Zeigler, *Problems in the History and Philosophy of Physical Education and Sport* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1968), p. 2.

[10] Sterling M. McMurrin, "What about the Philosophy of Education?" *The Journal of Philosophy*, LIX (October 25, 1962), 629-637. (The other side of the question was presented by B. Othaniel Smith, "Views on the Role of Philosophy in Teacher Education," in the same issue on pages 639-647.)

[11] Earle F. Zeigler and Harold J. VanderZwaag, *Physical Education: Progressivism or Essentialism?* (Champaign, Ill.: Stipes Publishing Company, Revised Edition, 1968).

15) Fraleigh makes some "ought to be done" suggestions at the end of his paper. They are pointed and pertinent. May I suggest one more? It is, "These professors should relate to philosophical scholars in both philosophy and philosophy of education—and to their professional societies."

Concluding Statement

In conclusion, I wish to reiterate that this paper by Professor Fraleigh represents a significant contribution to this aspect of our work at the present time. I feel that he has caught the "spirit" of what has been taking place in the 1960's. I look for continued and increased activity in this decade—including other types of philosophical investigation related to our movement-oriented profession—and I trust that the "administrative burden" will not keep Warren Fraleigh from continuing his interest and work in such endeavor.

Metheny's Reaction to "Theory and Design of Philosophic Research in Physical Education"

Eleanor Metheny
University of Southern California

I am always impressed by Dr. Fraleigh's ability to sort out the component parts of complex ideas—and his ability to show relationships between parts and wholes.

In the paper now under consideration he has identified the components of philosophically-oriented research studies in terms of:

- a source philosophy or philosophic system
- a phenomenon of interest to the researcher
- a methodology for studying the phenomenon within the context of the source philosophy

For example, he has noted that:

Dr. Ellfeldt and I used the method called "theory building" to study one aspect of the phenomenon called "movement" within the context of a source philosophy called "symbolic transformation."

Dr. Zeigler used the method called "structural analysis" to study another aspect of that phenomenon within the context of an unidentified source philosophy, which might be called philosophic system "Z."

Dr. Sheets used a method called "phenomenological analysis"—or, more precisely, "Husserl's version of phenomenological analysis"—to study another aspect of that phenomenon within the context of a source philosophy called "Husserl's philosophic system" or "Husserlian phenomenology."

And, for purposes of discussion, I would like to add a fourth example:

Dr. Physical Educator used a method called "controlled experiment" to study another aspect of that phenomenon within the context of an unexamined source philosophy, which might be labelled as "Aritomistic pragmatism."

And so we have four source philosophies—each based on a distinctive set of assumptions—and each reasonably well developed in terms of the concepts of metaphysics, eschatology, teleology, axiology, ontology, epistemology, aesthetics, logic, and terminology.

> (Or perhaps we have only three source philosophies—because I have not been able to identify source philosophy "Z"—as used by the structural analyst.)

And we have four identifiable methodologies—called theory building, structural analysis, phenomenological analysis, and controlled experimentation.

Which suggests the question: What would have happened if Dr. Ellfeldt and I had utilized the method called theory building within the context of some other source philosophy—say "Aritomistic pragmatism"?

> Would we have come up with a different set of findings? A different set of conclusions? And—would our Aritomistic-pragmatic colleagues have been inclined to agree with our theories? Particularly if we had phrased them in the terminology of Aritomism and pragmatism?

These questions suggest another question which troubles all philosophically-oriented researchers—and particularly those who are working within the context of any of the non-Platonic or non-Aristotelian systems.

> Should an avant garde philosopher preface every paper with an explanation of the basic assumptions, tenets, logic, and terminology of his chosen "source philosophy"?

Dr. Sheets prefaced her phenomenological analysis of dance with a long explanation of the premises, methodologies, and terminology of Husserlian phenomenology. In general, I have done little more than mention the fact that I am proceeding within the context of a set of epistemological theories which were initially proposed by Cassirer and later developed by Langer and others. And at times I have not even done that.

But in the long run, Dr. Sheets' studies and my studies have been equally ignored, rejected, and condemned by our Aritomistic-pragmatic colleagues.

This suggests the question: Should an experimentally-oriented researcher who works within the context of a vaguely defined and largely unexamined Aritomistic-pragmatic source philosophy preface his studies with an explanation of the basic assumptions, tenets, logic, and terminology of his own philosophical context?

Or: Shall we ask the structural analyst to identify the logical structure of his own underlying "source philosophy"—as distinguished from the logical structure of the philosophic systems he is analyzing?

> Which suggests the subsidiary Question: Can the educational consequents of one philosophic system be deduced by the deductive logic of a logically incompatible philosophy which rests on a different set of premises about the nature of human reasoning?

Or: Can Husserlian logic be analyzed by Aristotelian logic?

Then, one quick comment about the basic philosophic positions of "leaders in physical education"—as identified by Donn Bair some fifteen years ago.

As you remember, Dr. Bair devised a multiple-choice questionnaire which presumably identified the educational consequents of four philosophic systems.

Personally, I returned the questionnaire unanswered, with a comment to the effect that my own philosophic position was not represented in the choices offered. And Dr. Bair told me that he had not included any of the basically existential positions—because he had been told that few, if any, educators subscribed to the tenets of existentialism.

Among the "leaders" who did respond to Dr. Bair's questionnaire—one checked the pragmatic choices in all analytic categories. The rest evidenced a high degree of eclecticism—in that they changed philosophic systems from category to category—and apparently felt no intellectual distress in doing so.

And so the "leaders" revealed their own largely unexamined philosophical position as a vaguely defined mixture of four logically incompatible positions—alike only in that all were rooted in the essentialism of Plato and Aristotle.

Which leads to the question: So what else is new in physical education?

PHILOSOPHIC RESEARCH

Physical Education and Lived Movement*

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The Ohio State University

The leap from immediate experience into the scientific framework constitutes a fundamental error which, when committed, inevitably leads to a course of action which places the subject and his world into a dichotomous relationship. The lived world then becomes the unreal, mythical and imaginary one, and the unlived world of scientific hypothesis and abstraction, is charted out before us as the real state of affairs. Thus, we become ensnared in the enormously ironic and absurd anomoly that the lived world, the experiential world, is in truth a myth and an hallucination, while there exists an unlived and un-experienced, hidden world behind and beyond the senses, which constitutes the reality of things.

Introduction

The controversy over specificity as opposed to generality in the area of learning, especially as it relates to motor skill, has been raging for some time. Educational researchers, in the true scientific spirit, have been in pursuit of a "rosetta stone" which will solve the mystery of "how we learn." The underlying assumption to all this, however, is that such a rosetta stone, such a decoding device exists. There are some who are convinced that differences in behavior may be reduced to physico-chemical distinctions which are operant within each and every individual. For example, I have heard an educational psychologist state that the difference between the person who can read and one who cannot is in the chemical composition and activity of the brain. He argued that when a child learns to read, certain chemical changes in the brain take place. Therefore, if we can discover the nature of the differences, or analyze the chemical composition of one state, as opposed to another, it is entirely conceivable to develop a pill which will alter the chemical composition of the brain from that of the non-reader to that of a reader. Thereby, we would eliminate the long, wasteful, inefficient, and tedious process of "teaching" the child to read.

Think of the enormous implications this has for all of education. And consider, in particular, the ramifications of such a theory for physical education. If the difference between a skilled person and one who is unskilled is truly a chemical one, then we ought to be going about the business of developing everything from a crawl stroke pill (which would be water soluble of course) to a tennis backhand tablet (which would come framed in steel, aluminum, or wood, depending upon the student's preference in rackets). Or perhaps we should concentrate on a general, all purpose, motor-ability pill which would guarantee instant results in the basic or fundamental movements such as running, jumping, and throwing. The movement-education people would, no doubt, be absolutely ecstatic over the development.

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* For this paper I am greatly indebted to Erwin W. Straus for the ideas and principles presented in his volumes, *Phenomenological Psychology* and *The Primary World of the Senses*. I have no doubt that the lived experiences in the world of physical education and sport can do nothing but affirm his views.

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Of course, the basic hypothesis behind all this is that there are a series of "universals" which somehow take the form of skill categories or activities. Thus, it is assumed that there is a "reading" skill, a "crawl stroke" skill, and a "tennis backhand" skill. But with all our theories about learning and transfer, it must be pointed out that they are just that—theories. And the question of how generalities become particulars and how particulars become generalities still remains very much unresolved, appearing to be no nearer solution now than when it was first raised.

I think, perhaps, the reason for this is because it is essentially a metaphysical question concerning the essential nature of being that our educational researchers (of whom I include our physical educationists) have ignored. It is no wonder then that they are ignorant of the implications of the assumptions they have made in pursuit of their admittedly worthwhile objectives. But in this case, while ignorance may be an extenuating circumstance, it is no excuse for the failure to see the crucial significance of the environment surrounding both subject and researcher within which each are inextricably immersed.

The pursuit of objectivity which has reduced subject to object and experience to a series of categories, treated as operating independently of each other, cannot hope to account for a subject's or organism's behavior. Every lived experience reveals to us a situational dependence upon an attitude towards our environment which is subject to change, and indeed changes from moment to moment.

In the attempt to explain movement, our researchers have adopted the "tried and the true" methods of physiology. But understanding movement skill ability, and its acquisition, is incomplete to say the least, and incorrect to say the most, without regard for the living subject and recognition of his purpose and posture toward the environment. This, of necessity, calls for a psychology of movement; one which is not based upon the principles of physiology and physics but, in dealing with lived movement, must accept the challenge of developing principles of its own. Physiology, of course, divorces itself from lived movement. It "studies neural events *within* an organism, between 'input' and 'output,' substituting stimuli for objects and muscle activity for action."[1]

How did this state of affairs come about? The lack of clarity concerning one's metaphysical position is probably the cause and to clarify this I should like to dwell for the next few moments on this topic.

Descartes and His Influence on Movement

"I shall close my eyes, I shall stop my ears, I shall call away all my senses, I shall shut out even from my thoughts all images of bodily things."

With this statement Descartes begins his Third Meditation. It is the classic and traditional call to reason. It sounds the trumpet and takes up arms against experience and perception. It is the age-old scholarly cry that the way to truth and reality is through logic, deduction, and rationality. And with it Descartes establishes the precedent, not only for separating mind from body, but more significantly, separating the living person, the experiencing organism, from his world.

The enormous effect this has had on our approach to everything from science to education is incalculable. It has dictated the directions by which entire disciplines steer their courses of action. As a case in point, witness the history of psychology. If one were to ask the contemporary psychologist "whether psychology is, can or must be a branch of natural science, no doubt the vast majority would answer with an unrestricted 'yes.' Captivated by the metaphysical tradition and impressed by the tremendous success of scientific research in physics, chemistry, and biology, they have widely accepted the thesis that there is but one Science (and) that the methods of objective observation, experiment, and measurement have a claim to universal validity."[2]

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[1] Erwin W. Straus, *Phenomenological Psychology*, p. 198.

Thus an objective psychology has become the order of the day. So too has it come to pass that an objective physical education has become the order of the day. By this I mean that we are embracing the objective techniques of the physical, biological, and social sciences in the worthy endeavor to understand the nature of behavior, mechanically, physiologically, and psychologically, within the boundaries of a discipline based on human movement and activity. However, the assumption of such techniques, without recognizing the metaphysical commitments one must make to do so, constitutes grave oversight on the part of researchers, to say the least. For, if indeed an objective physical education forces upon us a set of rules which do not act as guides toward ultimate revelation of the real state of affairs, but rather establishes a rigid framework from which it is almost impossible to extricate oneself, leading to hypotheses and explantions far removed from the reality of the living, experiencing being, then, in truth, it becomes our scientifically minded colleagues who lead us into a dream world, not our philosophers. But this does not have to be the case. In fact, an esteemed physicist warns us against the arbitrary acceptance of established laws. Heisenberg writes:

> The transition in science from previously investigated fields of experience to new ones will never consist simply of the application of already known laws to these new fields. On the contrary, a really new field of experience will always lead to the crystalization of a new system of scientific concepts and laws. They will be no less capable of rational analysis than the old ones, but their nature will be fundamentally different. . . . Thus the hope of understanding all aspects of intellectual life on the principles of classical physics is no more justified than the hope of a traveler who believes he will have obtained the answer to all problems once he has journeyed to the end of the world.[3]

Straus goes on to add that the physicist not only gives the scientist "the right to develop his own principles, he also makes it his duty."[4]

With this in mind I wish to undertake an investigation of "movement" and introduce you to the phrase "lived movement."[5] Because movement has been a subject of intense discussion and controversy of late in physical education, I deem it appropriate that we undertake its investigation in a manner which hopefully will shed some light. I have no illusions, however, about dissipating any of the heat. But since, in the lived world, light and heat often go together and seem to co-exist, perhaps the generation of some heat as a result of what follows may not be all that bad.

Let us return briefly to Descartes because his views have had great influence on the way we have come to regard movement. By and large, it is universally accepted that by movement we mean motion which takes place according to the laws of classical physics. It was Descartes' contention that movement was purely a mechanical act; that the ability to change location, or assume a different attitude, belongs in the realm of a material world (res extensa).

He writes in the Sixth Meditation:

> "I am aware in me of certain faculties, such as the power of changing location, of assuming diverse postures, and the like,

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[2] *Ibid.* p. vi.

[3] W. Heisenberg, *Philosophic Problems of Nuclear Science*, New York: Pantheon 1952. pp. 23-24. As quoted by E. Straus in *Phenomenological Psychology*, p. 39.

[4] Straus, *op.cit.* p. 39.

[5] "Lived Movement" was used by Straus as the title of a paper which appeared in the original French as "Le Mouvement Vecu," *Recherches Philosophiques*, Vol. 5, (1935-1936), pp. 112-138, and was translated and reprinted as Chapter II in *Phenomenological Psychology*, pp. 38-58.

> which *cannot be thought* and therefore exist apart from some substance in which they reside. But evidently, since the clear and distinct apprehension of these faculties involves the feature of extension, *but not any intellection,* they must belong to some substance which is corporeal, i.e. extended and unthinking." [6]

Thus Descartes identifies movement as physical, non-thinking and corporeal, severing it completely from the world of cognition, sensing and knowing (res cogitans).[7]

Now, of course, most physical educators reject Descartes' metaphysics. They proclaim loudly their conviction that man is a unity, a whole being, an identity of mind and body. None declare this more affirmatively than our scientific and research minded friends in the areas of psychology and motor learning. But in reality what has developed from an objective psychology is an objective psychology of motion and an objective sub-discipline called motor-learning, or movement behavior, or human performance.

However, I suggest that all of these are based on a psychology that objectifies the subject creating an extraordinary gap between the human being and his world.

I will offer only two examples of this but there are as many as there are motor-learning texts in the field. The assumption that the laws and principles of the physical and biological sciences are the dogma for explaining human behavior is never more evident than in Bryant Cratty's curious statement:

> "While human behavior may not be fragmented when subjected to philsophical speculations, scientific inquiry demands that at times we consider behavior in the plural. There seems to be kinds of behavior, which when observed, would likely be classified as either verbal, perceptual, motor, cognitive, etc." [8]

What Cratty seems to be implying is that philosophers and scientists play two entirely different ball games with the human being. He establishes the legitimacy of fragmenting behavior because "science demands it." Rather than asking the question "Does the fragmentation of human behavior reveal the true state of affairs?", he embraces the rules and regulations of the scientific method and proceeds to objectify everything in sight.

The second example I offer for your consideration is the seeming acceptance by our motor learning researchers of some kind of vague subject-object dichotomy. Joseph Oxendine states in bold words: "Motor learning is clearly a mental and physical process." [9]

And the dictum he follows in seeking to understand these processes is the "use of newer research techniques (in order to) gather objective, verifiable, and detailed evidence regarding learning and behavior." [10] This acceptance is further demonstrated by Singer's statement: "Intelligent movement is based on a series of stimuli, neural integration, and appropriate responses." [11]

The intimation about movement behavior here is that of an organism, separate and apart from the world, acting like a complex computer, gathering large quantities of information, sorting it into established categories and regurgitating it back into the world in the form of "appropriate responses." Again we see here the perpetuation of the Cartesian dichotomy. For the phenomenological researcher these explanations are far removed from the lived, experiential nature of affairs. These explanations, theories, and hypotheses are intellectual abstractions of the highest order.

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[6] Rene Descartes, "Meditations on First Philosophy, Meditation VI," *Philosophical Writings,* Translated by Norman K. Smith, New York: The Modern Library, 1958, p. 237.

[7] Descartes, op.cit., "Meditation II." p. 188.

[8] Bryant J. Cratty, *Perceptual-Motor Behavior and Educational Processes,* (Springfield, Illinois: Charles C. Thomas, 1969), p. 29.

[9] J. B. Oxendine, *Psychology of Motor Learning,* (New York: Appleton-Century-Crofts, 1968), p. 13.

[10] *Ibid.* p. 6.

[11] R. N. Singer, *Motor Learning and Human Performance,* (New York: The Macmillan Company, 1968), p. 48.

Lived Movement

Lived movement, which I contend must be of primary concern to our physical education researchers, simply cannot be understood under the rules of the game most of them are playing at present. Lived movement does not operate within the framework of the objective categories of time and space. Physical laws do not jibe with experiential perception. Yet, our researchers insist on reducing movement to a series of unlived, unexperienced objective categories. Perhaps now we can understand why the abyss which separates research from practical application exists. All three of the above mentioned motor-learning authorities (Cratty, Oxendine, and Singer) admit to the gulf between learning theory and practice.[13] Perhaps the major reason for this is that our coaches and teachers of skills operate with their students in a world of lived movement which makes the vast and overwhelming amount of data and statistical analysis, for the most part, irrelevant.[14]

Lived movement does not occur in a vacuum. In every environment and situation it takes on degrees of significance. In the physical education, sport and dance realm, lived movement is capable of achieving enormous levels of significance. In fact we teachers and coaches count and rely on this intrinsic and intriguing aspect of our discipline. What constitutes the fascination with, and the competitive challenge of, physical activity is the question with which we ought to be dealing. And it is precisely questions of this nature which will not be answered by objective psychological techniques. Yet, it is critical that we begin to understand and recognize the evidence that is so obvious that we tend to ignore it.

Significant moments in movement activity come from our experiencing them. These are the moments which provide the basis for the worth of activity and which constitute the motivating and driving force which causes us to return time and again seeking new, yet old engagements.

Let me illustrate this point by using Straus' analysis of the phenomenon of "jumping." He contends, and I agree, that "knowledge of the laws of mechanical movement does not lead to an understanding of lived movements." [15] He asks, Can we *with the same principles* describe and understand such a variety of movements as falling bodies, contraction of the pupils to light, gestures of greeting, grasping, and jumping a ditch? Can all of these be reduced to a common denominator? To time a movement such as pupil contraction the observer records objective clock time in measured seconds and fractions of seconds. Change in size or space also is measured objectively in terms of centimeters. However, in order to comprehend the phenomenon of jumping another approach must be taken. Of course one can, by objective means, measure the height or length of a jump, and its duration quantitatively. But what is being measured in this case is the jump, *not the action of jumping itself.* Now it should be obvious here of the distinction that is being made between a jump and the act of jumping. And it is precisely here at this point that I submit we commit our gravest error. We transpose our objective principles in our analysis of the jump, confident that it will lead us to the truth about the jumper in the act of jumping. It is true that "to comprehend the jump we need an analysis in terms of position," however, in order to "comprehend the jumper we need an analysis *in terms of situation*. These are very different things and one cannot be derived from the other." [15]

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[13] Cratty, op.cit. p. 67.
Oxendine, op.cit., p. 45.
Singer, op.cit., p. 269.

[14] Sometimes this mountain of material comes all dressed up or disguised under the heading, "new knowledge." I don't think it is new knowledge at all. Most of it serves as a poor excuse for awarding of Master's and Doctoral degrees and the pursuit of academic respectability and promotion.

[15] Straus, op. cit., pp. 43-44.

Whereas, in the analysis of a jump, space and time may be objectively measured as separate and distinct elements of a completed act already petrified as a static event of the past, the experiential act of jumping cannot be so viewed.

> In jumping, I face from here to there; I am directed at the *other* place across an intervening distance toward the spot where I have not yet arrived. None of these circumstances—the actual direction, the intentional relation to the *other* place, the intervening distance, the "over there" where I have not yet arrived, the "not yet"—can be understood in terms of common objective time. One need only reflect that the place to which I direct myself in jumping . . . lies at this very moment before my eyes. Nevertheless, it appears to me as something in the future. In jumping, the jumper orients himself toward depth, which we must not consider as merely spacial. Depth . . . is just as much depth in time, anticipating future. "Over there," the place to which I aim myself in jumping, is a place distant from me in both time and space. Space and time are inseparable in lived movement.[16]

So we see that space and time take on a depth and directionality in lived movement rendering such objective principles of separation and reduction to quantitative and theoretical units inoperable under experiential conditions. This depth and directionality seems to be revealed best, however, in terms of experiential description.

Let me quote a few phrases from descriptions by several students who have attempted to capture verbally the experiences of lived movement as they pertain to time and space:

> I felt there was limitless space below my body. . . . Above me the space was bound by a lower, pressing feeling brought on by the presence of a ceiling.[17]
>
> My body feels light, airy, free to fly. I am pushing space out of the way; tearing it up, atttacking it; now softly touching it.[18]
>
> Up here the distance appeared to be very short, yet the time underwater had been an eternity.[19]
>
> As the boards *rush up to me*, I hear someone breathing. . . . The ice *pushed back on my skate* as I'm jettisoned forward.[20]
>
> As I lifted my head to begin, I was no longer in first position, but the second part of the move—body piked, focus on toes, the legs shot back, the head lifted. *I hadn't moved yet.*[21]

Note particularly the one phrase where time and space were so interrelated, the terms become almost interchangeable. The distance was short yet time seemed eternal.

It becomes clear then that there is an essential distinction between lived movement and the execution of motion. For the former the living organism is regarded as an active, meaning-giving, purposeful being, while for the latter, the individual remains an objectified responder waiting to be manipulated.

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[15] *Ibid.*, p. 44.

[16] Straus, *op. cit.*, pp. 44-45.

[17] Mary-Frances Stokes, "Phenomenology: An Experience of the Self," unpublished paper.

[18] Karen Mullin, "Body Image in Dance Activity," unpublished paper.

[19] Barbara Shinn, "An Underwater Swim," unpublished paper.

[20] Cecil Eaves, "A Description of Playing Hockey," unpublished paper.

[21] Vicki Beeck, "A Description," unpublished paper.

What has been presented in this paper may be regarded as an argument for the necessity to re-examine the fundamental principles so thoroughly accepted by our psychology and motor-learning researchers in physical education. It has been contended that the laws of an objective psychology, which themselves are based on the laws and hypotheses of the physical and biological sciences, do not apply when dealing with lived, experiential movement. And it is further contended that it is *lived movement* which should be of primary concern to the physical educator. In this field we have barely scratched the surface. Further exploration of lived time and space, in addition to the investigation of such phenomena as language and verbal expression as they relate to movement, await phenomenological study. I hope that at least some of our researchers will re-direct their efforts along these lines.

Thomson's Reaction to "Physical Education and Lived Movement"

Pat L. Thomson
Fresno State College

Introduction

My first reaction is that Dr. Kleinman has said a great deal and ended far too soon. He suggests that we look into the heart of what is as man moves and is involved in sport and dance. Furthermore, he is suggesting we try on, or at least he is hoping to inspire some of us to try on, the panoramic lenses of the philosopher-phenomenologist to accomplish this. Phenomenological analysis, by the way, is an objective philosophical method of inquiry into experiential experience. I was first introduced to this method by Dr. Kleinman via the reading of a speech he delivered in 1966 to conferees at the Chicago A.A.H.P.E.R. Convention.[1] The essence of my reaction to "Physical Education and Lived Movement" is based upon several years' work with employing this method to my own and to my students' sport and dance experiences.

Dr. Kleinman has described for us a paradoxical dilemma with which we all live but tend to keep in our farthest, most "back hall closets." The dilemma-problem is one of search objectification which tends to destroy or erase from our consideration the essence of what our profession is all about. This is to say that our focus on man moving in sport, games, and dance has resulted in a kind of human fragmentation; we rarely take time to reaffirm the whole of man in his experiential totality. We do, do we not, quantify and total and measure and dissect and specify and add and subtract man's angle of limb to ground, to sky, to water? But where is the "whatness" (the quality, the essence of man) of man in what we do?

Dr. Kleinman's poignant description of his "motor skill pill" theory beautifully and clearly expresses this phenomenal problem. But let me continue with some specific reactions to portions of his treatise with which I agree, those parts which I question from a semantic point of view, and his basic premise for dilemma-problem solution which I feel needs reiteration and extension.

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[1] Seymour Kleinman, "Phenomenology—the Body-Physical Education," (unpublished speech, A.A.H.P.E.R. Convention, Chicago, March, 1966).

Agreement

"The lived world . . . becomes the unreal, mythical and imaginary . . . , and the unlived world of scientific hypothesis and abstraction is charted out before us as the real state of affairs."[2] This state of affairs, says Dr. Kleinman, is self defeating to our efforts for understanding human behavior relative to learning, motivation, and meaning. It hides from us the human significance of moving in sport and dance.

I totally agree that the place to look for an understanding is within the life style of man. In our case, this does become a metaphysical search within the experience of man moving; within "lived movement." The suggestion is quite simply that some of us inhibit our desires to eliminate all human variables from our research, that we become non-categorical in our observations, and that we be descriptive of who man really and totally is within his only knowable world. In other words, we need to take time to look into his "gut" world.

Kleinman explains that our objectivity must no longer reduce subject to object; examined experiences must no longer be treated as unrelated or independent one from the other. How do we do this? My interpretation of what he is saying leads me to the following conclusions. (1) We must accept as universally true the fact that a human being is his own subject-object (he is emotionally directed). (2) We need to add to our research tools of logic, deduction, rationality, objective observation, experiment and measurement the tools of subjective verbal analysis. (3) All human avenues of perception must be accepted as allowable and valid evidence. (4) We must accept the fact that movement is more than motion as described mechanically via the laws of physics. (5) We must examine behavior from the widest perspective available to us.

Dr. Kleinman's discussion of time and space as inseparable entities within a jump for the jumper and his sharing of his students' reflections following their experiencing of involved movement illustrate one way to accomplish the afore described goals of research. For it is, is it not, within the multi-relatedness of object to object, person to person, time to time, space to space, that we become interested or uninterested, able to know or to not know, and effected by deductive or inductive trends of thought? It is here where each of us becomes in the next moment something other than what we were in the previous moment. Life is lived movement, Dr. Kleinman. Physical education is man living in an intensely significant way. In it he can be catapulted to an incomprehensible height of awareness. He becomes one; one is he. As one, he is alone and only he can explain his own lived being.

Question

I wonder, Dr. Kleinman, if we really are ". . . ensnared in the enormously ironic and absurd anomaly that the lived world, the experiential world, is in truth a myth and an hallucination."[3] We all do share a common concern; we are, after all, are we not, questioning the exactness and whatness of what we do with and for people? Do we not all begin from the same place in observing an event such as a jump? Does not this event need as careful a look by our objective scientists as by our experientialists? Will not the jumper and the jump then be better understood? Is not the "in-experience" of the jumper enhanced by prior knowing of the physical principles involved? Is not the jump a beauty to behold because the jumper feels a togetherness with time, space, world and skilled self? An answer of yes to any of these questions infers for me that (1) we are indeed not trapped, and (2) the experiential world is where reality originates for either search.

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[2] Seymour Kleinman, "Physical Education and Lived Movement," (unpublished speech, N.C.P.E.A.M. Convention, Portland, December, 1970, preamble).

[3] *Ibid.*

It is perhaps true that our metaphysical differences explain whether we begin our search for knowing the extrinsic and intrinsic nature of human movement behavior from a part or whole explorative technique. I do not believe, however, that my choice to "zero" in on a particular muscle neuro connector reaction to understand a stimulus response situation infers my lack of concern for man as a total being in any attitude-environment situation in which this response might occur. It is precisely because of this reality that I might choose to examine a portion of this total phenomenon of "lived movement." It may only appear that I am not concerned with man's indivisible nature.

In pages one through ten, Dr. Kleinman seems to relegate blame for our failure to understand movement skill ability and acquisition of it to the scientists in our midst. I believe that this is an unfair accusation. After all is said and done, there have been philosophers in our midst and they have failed to create a language with which to communicate use of such a tool as experiential analysis which could help us reach a more enriched understanding of skilled and unskilled movement. Phenomenological analysis is experiential analysis, is it not? This way of describing the essence of man moving in his lived world has been with us since the time of Husserl's first writings. Perhaps the real problem is that neither the scientist nor the philosopher in each of us is listening to the other and a coalition of these two selves needs to occur. The blame, in my opinion, rests not in the processes of these kinds of search (and their varied directions) but in the searcher's ability to be both theoretician and scientist.

These questions should, perhaps, only be considered as semantic differences between Dr. Kleinman and myself. He has presented a challenge and a proposal. His proposal could be the avenue along which we should travel to solve our dilemma-problem of research objectification. It just might help to bridge the vast chasm of no information which now exists between specific movement and mind information and what is happening when a performer does his "thing." It is to this proposal of verbal analysis of experiential happenings that I wish to direct a few final comments.

Idea: Support

I agree that it is in studying "lived movement" where we will be able to throw off the intangible shackles of our microscopic and therefore atomistic understandings of human movement behavior. The significance of sport and dance performed well or for the pure pleasure of moving can be understood. Such questions as why we return over and over again to a same way of exercising ourselves, why we swim beyond pain and into a world of second-super self, and why we move beyond exhaustion in an "unchained melody" of a mountain climb are answerable.

The truth of these kinds of experiencings can only be examined by those who live them. I agree with Dr. Kleinman when he says that perhaps the heretofore unexplained can best be reached through experiential description. Illustrative of this method are the statements by five of his students which he has shared with us. His students are truly verbally talented individuals.

As I have mentioned before, this process of verbalization about an experience is phenomenological in nature. I tried this process for the first time while completing my doctoral degree at the University of Southern California. It does work; therein one finds for himself why he is there, what motivates him to return to the experience, and the intrinsic value it holds for him. It is a rewarding experience of reflection. It is, however, not as simple a process as it may appear. Those who attempt it often become ensnared, as Dr. Kleinman would say, in their objective and rational mental habits which make it illegal (a violation) for them to express the subjective subtleties of what has occurred.

Part three of Dr. Fraleigh's paper, written for your two philosophical research section meetings, describes the process of which I am speaking.[4] It also describes what Dr. Kleinman is saying. The challenge is . . . "will we try it?" Its very nature disallows separation of man from his environment, from time, from space, and from himself while examining his lived world. The assumption, of course, is that man is able to express himself verbally and in so doing communicate to us what is. Fortunately we are similar enough as human beings that this kind of communication is possible. We do speak the same language; well, we do with some effort and compromise. Other ways of expression which might be incorporated into this experiential dialogue could be the use of visual symbolization. I am speaking here of those communication skills available to us via the plastic and graphic arts.

How exciting it would be to have student repertoire showings of their lived movement experiences. Imagine with me for moment of a physical education art-communication gallery dedicated to golf, archery, football, track, swimming, dance, handball, wrestling. . . . Would this not provide us with a fantastic storehouse of information about human movement behavior?

Harper's Reaction to "Physical Education and Lived Movement"

William A. Harper
Kansas State Teachers College

Reaction

With the following brief remarks I should like to suggest that in this presentation, as elsewhere, Seymour Kleinman has, though with good intentions and with a deep concern for the future of our discipline, fallen prey to a grave and fundamental error which seriously compromises the worth of his remarks. It will be shown that what Kleinman proposes as the needed alternative to the scientific techniques of reduction and quantification, which he advances as phenomenology, is nothing more than note taking and reporting on the feelings an individual may have had while engaged in movement experiences; and that such reporting in no way begins to approach the rigor and grounding nature of transcendental phenomenology correctly understood.

Before I pursue this basic criticism, let me first say that I am in complete agreement with Kleinman and share his concern over the questionable methodological techniques employed by some of our scholars in psychology and motor learning, and I even see reasons to expand this scepticism to those procedures used by our sociologists, physiologists, philosophers and other persons proposing technical undertakings. All it seems have taken for granted and presupposed fundamental truths concerning those very conscious experiences which they propose to explain; and have supposed that everything known, to be known, must be explained with theories, models, numbers, units or formulas, and must be pursued by measurement, documentation, observation, quantification, deduction or induction. I suggest that a reading of Merleau-Ponty's *Structure of Behavior*, Erwin

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[4] Warren Fraleigh, "Theory and Design of Philosophic Research in Physical Education," (unpublished speech, N.C.P.E.A.M. Convention, Portland, 1970), pp. 27-43.

Straus' *Primary World of the Senses* and *Phenomenological Psychology*, or Edmund Husserl's *The Crisis of European Science and Transcendental Phenomenology*, will clearly show up these various approaches to fundamental truths and knowledges as basically naive. However, my purpose today is, rather than generating more heat between scholars of mutual interests and goals, to attempt to shine more light on methodology in general and therefore I will proceed to the matter at hand.

I would now like to turn to my original intention which was to show the serious error committed by Kleinman which has revealed itself in his unique understanding of the nature of phenomenology. He tells us, and rightly so, that the way we can examine the nature of man in his world is to employ the phenomenological method. He then reveals, incorrectly however, that this method relies upon a description of one's individual feelings in movement experience as the experience is lived. To capture immediate experience, which is presupposed by all other methodologies, Kleinman provides us with examples of description which rely on the following schema:

1) The individual describing the experience must first live the experience, i.e., perform in play, sport or dance.
2) He must then reflect on this particular experience.
3) He must then describe how the experience was lived, i.e., his feelings during the experience must be captured.
4) He must then relate the significance of such experiences to himself, the individual subjectivity describing the experience.
5) And somehow such descriptions, if performed by all of us, will lace together a foundation built upon firm evidences.

I will try to clearly demonstrate the difference between what Kleinman proposes as phenomenology, which is only reporting what one can remember of a particular experience, and transcendental phenomenology correctly understood. To do this I will use the evidence most familiar to you and Kleinman, that is, I will use Straus' piece of *phenomenological description* as cited by Kleinman on the essence of jumping and contrast that to the examples of *reporting experiences* performed by Kleinman's students, also cited by Kleinman.

Let us recall the piece of description offered us by Straus on the experience of jumping:

> In jumping, I face from here to there; I am directed at the *other* place across and intervening distance toward the spot where I have not yet arrived. None of the circumstances—the actual direction, the intentional relation to the other place, the intervening distance, the "over there" where I have not yet arrived, the "not yet"—can be understood in terms of common objective time. One need only reflect that the place to which I direct myself in jumping . . . lies at this very moment before my eyes. Nevertheless, it appears to me as something in the future. In jumping, the jumper orients himself toward depth, which we must not consider as merely spatial. Depth . . . is just as much depth in time, anticipating future. "Over there," the place to which I aim myself in jumping, is a place distant from me in both time and space. Space and time are inseparable in lived movement. (Straus, as cited by Kleinman)

This description results from a reflection upon consciousness and what is given or intended in it when the experience of jumping appears. It is a direct grasp of self-evident truth. Straus' description is pure in the sense that it is free from dependence upon any sensory experience, such as seeing, hearing, feeling, touching and is therefore not relative to the individual performing the description.

Straus' description grasps in a fundamental way an outline of the essential structure of the experience of jumping. He does not depend upon any particulars, as he has suspended all spatio-temporal existences, all individuals as well as his own personal subjectivity in his phenomenological posture. Straus has attempted to describe essential structures of the experience of jumping and such description is to therefore be understood as public knowledge, universal in its nature and it must therefore count as true for all people and for all time. Such truths uncovered in description cannot be refuted by anyone, unless the description is incomplete, inadequate or shown to be in error. There are essential differences between jumping and running, between jumping and eating, between jumping and seeing, between jumping and basketballs, between jumping and automobiles; and these differences are to be noted by the phenomenologist. Such descriptions result in the step by step founding of doubt-free knowledge necessary for the growth of our discipline. This is *knowing in a genuine sense.*

In light of the aforementioned, let us now recall a few of the examples Kleinman provides us of what we must take as his understanding of phenomenology:

> I felt there was limitless space below my body. . . . Above me the space was bound by a lower, pressing feeling brought on by the presence of a ceiling.
>
> My body feels light, airy, free to fly. I am pushing space out of the way; tearing it up, attacking it; now softly touching it.
>
> As the boards *rush up to me,* I hear someone breathing. . . . The ice *pushed back on my skate* as I'm jettisoned forward.

These pieces of reporting and creative writing differ significantly from that essential description offered by Straus. These examples of reporting may be interesting in themselves, but they do not pass for radical phenomenological description, and for the following reasons:

1) These examples attempt to capture immediate experience (as it is happening) by reporting it as it flows and by noting what comes to awareness. One must see this as an impossibility at the outset as one cannot be having or living an experience and be describing it at the same time, as each reflection and description results in a new experience. Therefore we must see this particular idea as futile from the outset.
2) We see then that in these examples of reporting, the results depend upon temporal sequences, i.e., the person living the movement must have had the experience (performed it) prior to reporting it. Questions arise here, as one wonders how long to wait before describing the particular experience; an hour? until we get home? while on the field or stage? a week later? a month? And, at what skill level do we report? Is a higher skilled individual's description more valuable than that of the lower skilled individual?
3) It must be self-evident that such reporting depends upon recollection and memory, not reflection, and is therefore subject to voids, errors, contrivances and embellishments.
4) For Kleinman, all of our knowledge in this fashion of reporting would depend upon each performer reporting his experience (as experience to Kleinman is performance) of dance, play or sport—one cannot know it until one has performed it—which in itself is a fundamental absurdity as we are given to know a great many things which we cannot perform and yet can at any time and any place bring before consciousness and describe, such as our knowledge of colors and tones, of objects like trees, rocks, lamps, and of lived experiences like dying. This is possible because it is the nature of consciousness to be conscious "of" something (intentionality). It is silly to suppose that one who may be good at performing should also be good at describing his experience. We must therefore distinguish between *knowing how,* which is necessary for Kleinman's idea of

reporting, and *knowing in a genuine sense*, which does not depend upon knowing how. These two senses of knowing are independent of one another.

5) And finally, evidences which are allowed by Kleinman are not allowed in phenomenology. You will notice that in the student's examples we find statements such as, "my body feels," "I felt there was limitless space," "I hear someone breathing." These examples of individual reporting rely upon sense experience, (i.e., seeing, feeling, hearing), upon individual and personal and therefore relative instances, upon the world of spatio-temporal existences, and upon individual moments not universals. Such reporting is nothing more than a remembered (*not* reflected upon) account of how one individual felt during an experience (performance) in sport or dance and is therefore beyond verification by any other person.

It must be clear that these significant differences between Straus' phenomenological description and Kleinman's experience reporting point up serious difficulties within the body of this paper, and if not grave errors there is at least a great deal of confusion as to precisely what we are to take phenomenology to be.

Let us, by way of summary, again illustrate the significant differences which it seems Kleinman has failed to notice by comparing and contrasting the natures of *reporting* and *describing*. The everyday use of the term reporting includes instances such as report cards, committee reports, year-end reports, book reports, personnel reports. We pay reporters to observe, take notes and relate the everyday occurrences to us in newspapers and on radio. Reporting takes place while immersed in the factually existing world of objective space and time, the region of reality. Description, on the other hand, involves careful focusing upon the essences of things and experiences known to us, through a direct grasp of what is given or intended in consciousness. In reporting one depends upon sense experience, such as seeing, feeling, touching, hearing, and smelling, evidences which are relative, often misleading (illusions, hallucinations and so forth) and dependent upon spatial and temporal location in the world; while in description we depend upon nothing but what appears to consciousness when we bring certain objects into view. Reporting is individual, concerned with particulars and is always from a point of view or a perspective; while in phenomenological description we are concerned with public knowledge, universals and, as such description is not from a particular perspective, such essential structures are available for all to "see." The report does not make use of reflection, only memory and recollection in observing activities and events; whereas description *must* proceed by reflection from the phenomenological standpoint. The report is often dependent upon relating an experience (event, activity) as already-having-happened, which comes necessarily after the fact, within historical time; while phenomenological description is not in any way dependent upon time or space, as essences can be grasped by anyone and at anytime provided the correct stance is assumed. In the report we are limited to an incomplete and superficial understanding, only tentative truths; whereas in description we attempt to make things more clearly known as they themselves are by uncovering them, laying experiences bare, unveiling their sense, meaning and structures. In reporting one *takes note* of something happening and then proceeds to take note of other occurrences necessitating other reports; whereas in phenomenology we *describe*. He announces it and we try to know it more clearly and distinctly.

Therefore, it must be seen that describing the universals rendered present in consciousness in a direct intuitive grasp of self-evident truth is one thing, namely transcendental phenomenology, while reporting one's feelings while engaged in a movement experience is quite another.

In conclusion, it seems that this short journey into methods available to our scholars has revealed two tasks which must be undertaken: 1) We must examine closely our present methodologies and see their limitations, their prejudices and their surface scratching nature and in this process of reevaluating their worth we must relocate them and base them upon a sound foundation of genuine knowledges which can be gained by using the method of phenomenology, and 2) We must however, in founding our techniques and knowledges, correctly understand the grounded and grounding nature of the science of phenomenology and not be mislead into either underestimating the complexity of human experience or into degrading the nature of phenomenology and believing it to be merely note taking and reporting, as such fundamental errors can have no other result than of delaying our future growth and our mature development.

Kleinman's Reply to Harper's Reaction Paper

Seymour Kleinman
The Ohio State University

("Why is everything so confused. Everything I wrote and spoke was true."—Marat)

I feel I must make some sort of formal response to Mr. Harper's reaction paper because it is obvious we don't see eye-to-eye on many things. Let me say at the outset that I am indeed grateful to him because his comments, if nothing else, have brought me up short, causing me to re-examine my position in these matters.

I will not attempt to develop in detail these differences. That would be an exhaustive undertaking and not appropriate for our purposes here. For the sake of clarity, I will list the points I wish to make, and if further elaboration is necessary, perhaps it will emerge in later discussion.

1) Mr. Harper's phenomenology is of the Husserlian variety. In my study of the literature, I have come to the conclusion that there are phenomenologies and there are phenomenologies. In fact, the term has become so widely used and interpreted that it is probably more constructive to take each author as an individual and try and grasp what he is saying within the context of what he establishes as his limits and his horizons.

   This is a far more difficult task than making a comparison between what one decrees to be *the true phenomenology* and pointing out where it fails to measure up to such a sublime, universal and absolute concept. Indeed if there is a common element to be found in all of the phenomenologies, it is the exhortation to look and see, take up and immerse oneself in what is there. Go to the act, the thought, the concept and take it for what it is. Perhaps if Mr. Harper had tried a phenomenological approach to my paper instead of a comparative analytic one, we might have established a better system of communication. Mr. Harper's critique reminds me of Maxine Sheets' volume published several years ago. She called it "*The* Phenomenology of the Dance." (Note the use of the word *the*.) I was critical then, and I remain so today, at the implication that there exists *the* phenomenology of anything.

2) Mr. Harper contends that what he calls pure phenomenological description reveals what is true for all people for all time. This pursuit of the absolute, he claims, is manifested in the form of essences which can be grasped by anyone. Because of this, it is not surprising that Husserl's

phenomenology was criticized and accused of developing into an idealism complete with Platonic forms. Mr. Harper in another paper provides an example of such a form when he talks about the universal nature of the essence of "womanness."* While Plato may beam with approval, I cannot accept this kind of transcendence in phenomenology. I deem it more appropriate to deal with existences rather than with essences.

In fact, the pursuit of abstractions is precisely what my paper cautions against, be they scientific or phenomenological. And perhaps this is why I have not been particularly attracted to Husserl's attempt to develop phenomenology into a rigorous science. Rules, such as Husserl sets down, and which Mr. Harper advocates we follow, inevitably direct us farther and farther away from experience. Each step down that road brings forth a new translation of the original experiencial act with the inevitable results that come from translations of translations. Most contemporary writers indicating interest in phenomenology have rejected strict adherence to these rules. Certainly Merleau-Ponty and Erwin Straus have done so. In fact, rarely does one find the word phenomenology in Straus' writings.

Over the past two or three years I confess to having become rather uncomfortable with the word. You will note that in the paper we are dealing with today, it appears only once in the body of the text. The question, "Whose phenomenology are you talking about?", has become indeed a very valid one.

For these reasons I prefer the phrase "experiencial description" be used when dealing with accounts of movement experiences.

3) I have always considered the phenomenological method to consist of two parts; description and analysis or reduction. A major difference between Mr. Harper's interpretation and mine appears to be that which he calls description, I call analysis. Mr. Harper calls the quote from Straus a "piece of phenomenological description." Straus, however, never calls it that at all. On the contrary, he states that in order to "comprehend the jumper we need an *analysis* in terms of situation." (emphasis mine) As I view it, analysis and description are two entirely separate things. And I would much prefer to concentrate on the descriptive realm because it is in this category where the concrete nature of experience is most capable of being revealed; or to put it another way, it keeps us within as much proximity, as verbally possible, to the act itself.

The primary lesson to be learned from men such as Merleau-Ponty, VanDenBerg, Straus and Kwant is that the subject is inextricably involved in the world long before reflection about it begins. The human being thus is condemned to existence and meaning on a much more fundamental level than that of reflection. And it is this level of existence which stands a chance of being revealed by direct, *non-reflective* description. That, I suggest is where the significance of the act lies.

4) One more major point. Because experiencial description reveals the subjective nature of behavior; that is *all* behavior, reflective as well as non-reflective, public as well as private, it becomes imcomprehensible for a phenomenologist to claim his description to be independent of spatial and temporal location or that it comes from no particular perspective. The attempt to develop an objective mode of inquiry which will yield objectively valid results may be appropriate for the physical scientist. However, the effort to objectify a process subjective by its very nature cannot hope to reveal the true state of affairs.

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* William Harper, "The Standpoint in Phenomenology," AAHPER National Convention, Seattle, Washington, April 6, 1970. Unpublished paper, pp. 4-5.

5) Mr. Harper states that experiencial description is "nothing more than note taking and reporting;" the implication being that this process is both naive and simple. I can only respond by encouraging him to try it sometime. Reports from students and my own experience convince me that it is one of the most difficult of all undertakings precisely because of the "rigor" with which it must be approached. It is indeed subject to error. I can conceive of nothing that man engages in in the world that isn't.

6) I am confused by some of Mr. Harper's conclusions as to what must follow as a result of engaging in experiencial description.
   a) I do indeed distinguish between engaging in an act and engaging in describing it. Description cannot hope to capture the experience as experienced. It attempts only to grasp its *significance.*
   b) Description does indeed depend on temporal sequence but so does reflection.
   c) For me, understanding an act is probably enhanced by experiencing it. I do not regard this to be a fundamental absurdity.

7) I could go on exploring additional points of difference, but it would be best at this point to conclude with the following:
   a) Mr. Harper, rather than dealing directly with the lived world of senses, prefers the world of abstraction, reflection, and essence. He pursues essence, I pursue existence.
   b) He seeks truth in universals. I look for it in particulars.
   c) His phenomenology would lead us to knowing *about.* This, I might add, is perfectly consistent with the direction of contemporary physical education.

      Mine would insist on knowing *how* and *why.* For this reason I argue for proficiency in performance above all else.
   d) Mr. Harper agrees with my criticism of present methodologies but offers us yet another objective science. His methodology may differ, but it proceeds down that same road toward objectification of the subject.
   e) Finally, his system appears to be a "closed" one with particular rules and regulations which can result in another "ism;" phenomenologism.

EXPERIMENTAL RESEARCH THEORY

Theoretical vs Statistical Design of Experiments

Franklin M. Henry
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The present-day world is characterized by a tremendous rate of scientific progress; the branch of applied mathematics called statistics has become increasingly prominent in the publications of research workers in psychology, education, and in our own field. Prior to my first physical education publication 33 years ago, I was a young psychologist. I recall how excited we were when we learned about the t-ratio (which permitted us to perform tests of the null hypothesis with precision using small samples, and thus revolutionized psychological research), and became aware of the variance analysis (which also revolutionized psychological research, since it made possible the performance of several experiments simultaneously). We became worshippers in the cult of the statistically significant, and indeed the pages of the *Research Quarterly* even today establish clearly that the purpose of experiments in our field is to carry out with religious zeal the test of the universal hypothesis.

Let us ponder for a moment how early-day science would have taken on a new dimension had our modern technique been available—let us attempt to evaluate the impact. The year is 1665. (Slide 1—see reference list for description of figures and tables). Here we have the young Newton sitting in the shade of the deciduous dicotyledon Malus edenii. He seems unaware of what is happening in the world about him. (Slide 2). Something has happened to make him aware. The pained expression probably signifies that he is now sitting *and thinking.* (slide 3). We have a pronouncement. "Gentlemen, I have made a most momentous discovery. When the fruit of Malus edenii reaches maturity (the tree being not only a dicotyledon but also deciduous), it detaches from the supporting branch, and engages in motion. This has of course been observed by others before me. My discovery is that when such detachment occurs, there is a statistically significant tendency for the motion to be downward, toward the earth, rather than upward toward the heavens. No doubt this phenomenon will occur when any supported body loses its support. As soon as this has been confirmed, I will move forward to discover other momentous laws of Nature—this one is just Newton's First Law."

The lesson is clear. Had Newton and his followers been worshippers in our cult, we would not have spent those billions of dollars on the round trips to the moon, because we would not understand gravity or the laws of moving objects; the money thus saved could have been put to other use. Our culture would be different in many other ways. Suppose Ohm had been one of our cultists—then, instead of I=E/R, Ohm's Law would be: If you change the voltage applied to an impedance, there is a statistically significant variation in the current flow. Thus there could be no electronics technology, no amplified rock and roll; we would not be causing deafened youth and psychoneurotic elders, and thus the world would be a better place in which to live (at the cost of no implanted cardiac pacemakers, etc.).

Turning concretely to 1970, I feel dissatisfied with the slow advancement of knowledge concerning oxygen debt since my flurry of activity in the 50's. It occurs to me that no one has determined the minimum activity level that will increase temporarily the post-exercise oxygen consumption. Before actually doing the experiment, I ask myself if I am following a productive pathway (slide 4). Two factors are operating—remember the term $\sqrt{N\text{-}1}$ in the denominator of the t-ratio. (This wave levels my sand castle; the critical amount of physical activity will surely reflect N, the number of subjects I test). So I go to the other extreme, and secure data on post-exercise oxygen consumption following very heavy exercise. Since the members of the Board of Editors are fellow cultists, I realize that acceptance is almost automatic if I do a variance analysis.

Table 1 gives a conventional rows-by-columns variance analysis of 9 minutes of oxygen debt payoff following heavy work (50 male subjects). One can see that there are statistically significant individual differences (F = 8.4) and a significant time effect (F = 1137.1). A conventional trend analysis shows that this time effect can be broken down into a linear element (the largest effect, accounting for 58% of the time variance), plus a quadric element that is half as large (accounting for 29%), also plus a cubic element that accounts for 11% and the remainder of five higher term elements that takes care of the final 2%. Note that even this remainder constitutes a highly significant source of variance, since F=40.7.

It is illuminating to present these trends graphically (slide 5). Disregard the solid line. The points labeled X are the minute-by-minute mean scores, while the straight broken line shows the linear trend. It is downward, reaching the pre-exercise resting level at minute 8 and zero oxygen consumption at minute 10. The remaining 42% of the trend is curvilinear; it reaches zero oxygen consumption at minute 1, goes through a negative oxygen consumption phase between minutes 1 and 6, and then increases to reach the current consumption level at minute 10.

These bizarre findings do not imply that statistical analysis is meaningless as applied to physiological problems—rather the lesson is exemplified by the cliché "ask a stupid question and you get a stupid answer." It is certainly stupid to blindly and unthinkingly run a set of data through any kind of critical statistical analysis, just to see if the testing of the null hypothesis poses a scientifically meaningful question. Moreover, this example raises grave doubt as to usefulness of the conventional trend analysis over and above just determining if the trend is linear or non-linear.

If one is fixated on the desirability of using a variance analysis, or finds it expedient to do so because of cultural pressure, it can be done in a meaningful

Table 1. Rows-by-columns and trend analyses.

Oxygen debt (liters) by minutes

Variance Source	SS	df	MS	F
Total	148.53	449	—	—
Subjects	6.20	49	0.126	8.4
Minutes	136.45	8	17.057	1137.1
Error	5.88	392	0.015	—
Trends by minutes				
Linear		1	79.13	5275.
Quadratic		1	39.84	2656.
Cubic		1	14.43	962.
Remainder		5	0.61	40.7

way. Let us start out with some sort of theoretically based hypothesis, as for example that because the law of mass action should be operative, the recovery oxygen consumption should drop off exponentially to reach the resting rate as an asymptote. Since there are supposedly two kinds of oxygen debt, the mathematical curve will be the sum of two exponentials, namely $y = a_1e^{-k_1t} + a_2e^{-k_2t} + c$. Having determined the parameters of the curve by fitting it to the data, one has available the minute-by-minute values for each minute as predicted by the curve, and the discrepancies (△) between these values and the observed minute-by-minute means. The resulting curve is the solid line in the graph (slide 5); the variance analysis of Table 2 uses the variance of the exponential line and of the deviations from it to replace the main effect *minutes* in the previous variance analysis.

Table 2. Rows-by-exponential line variance analysis.

Oxygen debt (liters) exponential trend

Variance Source	SS	df	MS	F
Total	148.53	449	—	—
Subjects	6.20	49	0.126	8.4(49°/392°)
Exponential Line	136.39*	4	34.098	5369.5(4°/4°)
△ Line	0.025*	4	0.006	—
Residual	5.91	392	0.015	—

In the case of a least-square fit, SS line + SS S^2△ line equals SS minutes.

* Both values obtained by direct calculation; S^2line = 0.30308 and S^2△ = 0.0000564 (max. likelihood method) both multiplied by Nk for SS.

Note that in a variance analysis of N rows (subjects) having k columns (minutes), the ordinary SD squared (i.e. S^2, using N rather than N − 1) when multiplied by Nk (the total number of pieces of information) becomes the Sum of Squares (SS). Moreover, S^2△ refelcts the sampling error of subjects, estimated from an observed sample of means. It is computed from the nine differences between observed column means and predicted column means, thus it has already been divided through by N. The F ratio is therefore $[(S^2_{line} \cdot Nk)/df]/[(S^2\triangle \cdot Nk)/df]$ which reduces to $S^2_{line}/S^2\triangle$ since df is the same in numerator and denominator. However, if one completes the R x C variance analysis, MS Residual furnishes an alternative error term for the F-ratio.

It is easier to understand the meaningful part of the variance analysis if the SS are converted into real variances (S^2). Then, if we are concerned with amounts rather than tests of significance, we have $S^2 = 0.3301$ for the total variance of 450 scores; of this amount, 100 x 0.3031/0.3301 or 92% is accounted for by the exponential curve. Similarly, 100 x 0.000056/0.3301 or 0.02% arises from the deviations between the curve and the observed 9 minute-by-minute means (or more simply $(100 \times S^2\triangle)/(S^2\triangle + S^2_{line}) = 0.02\%$). Alternatively 100 x 0.0132/0.3301 or 4% comes from the minute-by-minute scatter of the individual scores about the exponential curve.

It is quite true that according to the conventional trend analysis, a curve of the form $y = ax + bx^2 + cx^3$ would fit the data equally well, although those who use the trend analysis do not actually exhibit the trend curve or its components in specific mathematical or graphic form. It would in fact be embarrassing to do, as illustrated by the bizarre curve components illustrated in Table 1. In contrast, the exponential constituted an *a priori* theoretical statement based on physiology and biochemistry—since it does indeed fit the data rather accurately, we are led to believe that these theoretical antecedents have been strongly supported by the experiment. It is desirable to mention at this point that even if the theoretical curve did not fit the observed data as well as some empirical curve form, it would still be preferable, scientifically, to use the theoretical curve. (One of my research reports—*Research Quarterly* 24:169-175, 1953—provides a convincing example. Also see *Research Quarterly* 26:147-158, 1955. I have given another important example of the derivation and use of a theoretical curve in J. Aviation Medicine 27:250-259, 1956.) (These examples do not use t- or F-ratios.) Many other examples could be cited—all research using radio-isotopes is based on theoretical curves; the blood concentration curve for ingested vitamin C is a theoretical two-component exponential, and so on.

At this point, some of you would like to ask: How does one generate the theoretical ideas and/or mathematical models that are required for the *theoretical* rather than *statistical* design? I have no simple answer, except to suggest that you think about mechanisms that may be involved, and how they might be expected to work. In my paper on the growth and decay of aviator's "bends" referred to above (and the one on world records, as well as others), you should be able to trace out my thinking. Much can be done at a broader and less specific level. For example, Doris Richards (Research Quarterly 39:668, 1968) postulated that the beneficial effect of warm-up should obey a law of diminishing return as a function of the amount of warm-up exercises—this would logically be an exponential function. On the other hand, the increased work would cause increased fatigue and thus tend to impair performance. The net beneficial effect for any particular amount of work would be the difference between the two mathematical factors. Her data were in agreement with the mathematical model; she found the predicted optimal amount of warm-up dosage as well as the zero effect with too much dosage.

In my work on oxygen intake during exercise and recovery in 1951 (J. Applied Physiology 3:427), I might first have visualized a simple hydraulic model. Assume that a person dumps a standard cup of water into a container at say 10 cups per minute. There is a hole in the bottom of the container—the water that runs out of this hole can be considered to be "terminally oxidized" by inspired oxygen. This water would pour into a graduated measure so that I could know the "oxygen consumption" per minute. According to the model, some fixed percent of the water in the leaky can (e.g. 25%) would flow out during each minute—increased rate of work (either a larger cup or more cups per minute) would raise the water level (and the amount) in the can—I call this "oxidizable substrate." This would increase the pressure, and thus rate of outflow, which would always remain at 25% of the amount in the can at any instant. Presently a steady state would be reached—input and outflow would be in equilibrium. Next, suppose I stopped work (i.e. put no more water *into* the system). The water in the can (the oxidizable substrate) would decrease exponentially—25% of the amount would be terminally oxidized each minute.

I visualized these ideas in physiological terms, and in 1951 put them into a mathematical model of debt formation during exercise, which gave the oxidizable substrate and thus the O_2 consumption as $y = c - ae^{-kt}$ during exercise (c being the steady-state rate); for recovery this became $y = c + ae^{-kt}$ where c was the resting rate.

This model which was of course worked out a year or two before formal publication was only adequate for the situation of mild exercise where lactate debt was trivial and could be neglected. Nevertheless it led to several findings of interest in physical education—for instance, the oxidation rate parameter k exhibited individual differences which were favorably influenced by training and unfavorably affected by the aging process. It seemed to be independent of rate of work or body weight, and was the chief factor in determining individual differences in alactic oxygen debt and accounting for the lower aerobic work capability of women.

In 1956 (J. Applied Physiology 8:608) the model was extended to moderately heavy work. Based on current biochemical knowledge, it was visualized that a particular bit of oxidizable substrate (which can be called H since it is indeed metabolic hydrogen), being carried for a moment in the form of reduced coenzyme, would probably obey the law of mass action in either passing (a) directly or via the Kreb's cycle to the flavoprotein-cytochrome system with attendent ATP production, or (b) would reduce pyruvate to lactate, thus constituting the lactate oxygen debt. Process (b) was known to be reversible—experiments by Cori and Cori in the 1920's had shown that inactive muscles converted blood lactate back to glycogen or glucose *during* exercise; the liver was similarly active. Thus it seemed reasonable to set up a two-component alactic-lactic exponential model for deferred and active oxidizable substrate formation during exercise and debt payoff during recovery. It was found that these models did indeed describe the oxygen consumption during exercise and recovery for several rates of moderate exercise. Subsequently J. Royce (Arbietsphys. 19:218, 1962) found that the model with its various parameters predicted oxygen consumption with satisfactory accuracy in several other exercise situations.

Tomorrow, F. Katch and R. Girandola will present further experiments stemming from this theoretical model, using it to account for the minute-by-minute time pattern of oxygen consumption during very heavy exercise and recovery. Please note that this is *not* a biochemical model (although it does have a physiological basis); it is *macro* rather than *cellular*, although hopefully it may serve as a stimulus to research in those directions as well as proving useful in improved understanding in the physiology-performance area that constitutes our own field.

At this point permit me a brief digression. This is a model to predict quantitatively the time pattern of oxygen consumption during exercise and recovery. To those in the audience who are physiologists or biochemists, I state with considerable vigor that you should exhibit reasonable standards of fairness toward me—if you wish to use my model to investigate the time pattern of blood lactate, or of biochemical energy production, by all means do so. (There will be no monetary charge). But do not criticise me for not doing your research work. And if you develop a biochemically more valid model than mine—one that accounts for the time pattern of oxygen consumption—I will be the first to congratulate you, and will discard my model and use yours. But you will of course have to show the evidence that it does quantitatively predict the time pattern of oxygen consumption in humans.

Please keep in mind throughout that my purpose is to evaluate, as best I can, the merits of the *theoretical design* approach to physical education research, in contrast to the merits of the statistical analysis design. I ask: where would I and the others have been led if we had been Practicing Cultists? May I again emphasize that the general method I advocate is in widespread use in other and more mature sciences, and is definitely not to be thought of as inappropriate or impossible to use because of the presence of individual differences in our intact and living experimental material.

I turn now to an example from the field of motor learning. The experiment is on simple reaction time for a complex movement. According to M. L. Norrie, there is an expectation that learning will occur in this situation. She has very kindly made her research data available to me. (51 subjects, 50 trials.) One could a priori formulate the simple theory that learning (improvement) must become increasingly more difficult as perfection (or in this case, a physiological limit) is approached. If we postulate that each trial should result in a constant percentage improvement in the amount still to be learned at any particular stage of practice, the mathematical statement will be the exponential equation $y = ae^{-kt} + c$. Or, if you prefer a more elaborate theoretical basis, read pages 664-666 of Woodworth and Schlosberg's *Experimental Psychology* (1954).

Now, still on an a *priori* basis, let us ask if it is not reasonable to expect that statistical analyses of the first 25 trials should lead to some prediction of performance at some later stage of observation—e.g., the last 10 trials, #41-50.

(After all, 50 trials on 51 subjects is considerably more data than one typically encounters in experiments on learning.)

The trial-by-trial mean values for the first 25 are shown in the graph (slide 6) together with a rows-by-columns variance analysis (Table 3). Clearly there are statistically significant individual differences in the mean performances of the 51 subjects averaged over 25 trials (main effect subjects, F=24.64). Moreover, the mean values trial-by-trial bounce around considerably more than would be expected by random sampling (main effect trials, F=3.89, which is statistically significant). While this finding, to a cultist, constitutes a solution to the problem, I am incapable of extracting from it anything that is scientifically useful. In my desperation (4th slide) I performed a formal "trend analysis," which leads (slide 6) to MS=395.5 for linear trend and 8.587 for the residual trends; the error MS being 6.35, the F-ratio is 62.28 for the linear component and 1.35 for the sum of the remaining trends. Since the latter would have to be 1.55 to be statistically significant at the 5% level, I concluded that I should be concerned only with the linear trend.

Table 3. Variance analysis of the reaction time practice effect, including both linear and exponential fractionation of the trials effect.

Reaction Time (Sec^{-1})

Source	SS	df	MS	F	F.05
Total	16039.	1274	—	—	—
Subjects	7825.	50	156.50	24.64	1.36
Trials*	593.	24	24.71	3.89	1.53
Error (SxT)	7621.	12.00	6.35	—	—

* Line 395.5 (1) } or 500.7 SS (2 df)
△ Line 197.5 (23) } expon. 92.3 SS (22 df)

To check this point, I performed the regression variance analysis described by McNemar in pages 275-280 of *Psychological Statistics* (1962 edition), noting that on page 202 he has stated that this is "the only adequate statistical test for answering this question . . . [as to whether there is curvilinearity]." Actually this test reduces to the ratio $[(N - k)(n^2 - r^2)]/[(k - 2)(1 - n^2)]$ where N is the number of individuals, k is the number of trials, n is the correlation ratio eta, and r is the product-moment correlation. (In this application, y would be RT and X would be the serial number of a trial.) This test also shows no significant non-linearity. I therefore draw the linear regression line in the figure (6th slide). It seems to have been drawn too high, but that is an illusion, since it does indeed pass through mean y at the median trial.

At this point, I find a tremendous rise in my SQ (skepticism quotient), since my scientific conscience conflicts with my allegiance to the Cult—I simply cannot accept the implicit prediction that with sufficient further practice the RT will go down and down, becoming less than the physiological limit and eventually reaching zero or even negative values. So I am herewith forced to sever my formal allegiance to the Cult and go back to the theoretical curve, even though the evidence is so clear that the curvilinear hypothesis must be rejected on abundant objective acceptable (to others) evidence.

The theoretical curve is also shown in the figure (dotted line)—the curve parameters are $a = 2.88$, $k = 0.0921$ and $C = 20.45$ (in sec^{-1}). It is time for the moment of truth. I plug trials = 45.5 into the exponential equation (since this is the median trial of #45-50), and calculate that at this stage of practice, the mean performance score should be 21.00. The observed means for trials #45-50 range from 20.65 to 21.24 with the grand mean at 20.90. While the agreement is not exact, it is certainly close enough for me to have made my point. I did go one step further, fitting the exponential curve to the complete 50 trials. The parameters are of course somewhat different ($a = 2.60$, $k = 0.168$, $C = 20.85$), resulting in the lower (dashed) curve in the figure. Nevertheless, the main features were predicted reasonably well by the data of the first 25 trials, both as to curve form and mean performance level at the plateau. This is not to say that had the subjects been given 500 trials (rather than 50), there would have been no further change. It would be reckless to extrapolate that far. But any other type of analysis would be faced with that sort of limitation.

These are not unique examples. I could equally well have used data on heart rate during exercise, or ventilation, or stabilometer, pursuit rotor or ladder climb learning, to name just a few possibilities.

I suppose that the main current of this discourse is that the generation and testing of theories is the proven method of science, that such theories are not tested in a meaningful way by the conventional use of the null hypothesis, and that our distorted visualization of the magic of t and F is a major obstacle to meaningful research in our field. We will only break this vicious circle by going back to the classroom, by enrolling in Math 5 (analytic geometry); Math 9AB (Integral Calculus and Differential Equations), and then gain insight and experience in the formulation of meaningful theoretical models by studying how this is successfully done in other and mature fields of science. This is not a pleasant prospect.

Please do not get the idea that I am opposed to statistical analysis. Quite to the contrary, I am simply insisting on a broadening of our approach, and demanding that the methods available be used intelligently rather than blindly. The fitting of mathematical curves is statistics—moreover, correlational analysis and addition of variances is the very language of individual differences, and of the quantitative evaluation of error. (As some few of you may know, I have done a fair bit of writing in these areas over a considerable period of time.) But these are not the applications that constitute our worship in the Cult of the Statistically Significant. And please do not quote me incorrectly, for I have neither said nor implied that the use of the t-test and the F-test is utterly without any redeeming virtue. Nevertheless, I have shown objectively that thoughtless acceptance of the simple answers that these tests give is clearly stupid, and that at best these answers do not constitute meaningful scientific analysis. Far from being powerful tools of scientific methodology, they would appear to play the role of shoddy substitutes for genuine scientific interpretation of data. Those who calculate these statistics should realize that having done so, all that in truth has really been (and in fact could be) accomplished is to clear out the static of sampling error, in preparation for meaningful analysis of the data.

Description of Slides

1) Newton is sitting under the tree; apples are falling.
2) An apple scores a direct hit on his head.
3) He smiles as he states with upraised finger: ". . . rather than upward toward the heavens."
4) F. H. is depicted as running earnestly up a down escalator, asking "Is this direction really leading anywhere?"
5) This is a graph of the first 9 minutes of oxygen debt payoff, the values ranging from 3.23 liters at minute zero to 0.55 at minute 9. The trend lines for the linear and non-linear components are given, there is also an exponential curve which fits the points almost exactly.
6) This is a similar graph of the first 25 reaction time trials. The exponential curves are seen to describe the trend, while the linear line does not seem to do so.

Marteniuk's Reaction to "Theoretical vs Statistical Design of Experiments"

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My objective in replying to Dr. Henry's paper will not be to be critical, for his ideas and examples are sound. Rather, I would like to take this opportunity to expand on several points mentioned in Dr. Henry's paper and perhaps provide a somewhat different perspective on this topic of statistical vs theoretical design of experiments.

My first point for discussion concerns Dr. Henry's statement that statistics are only a tool and as such can only be used "to clear out the static of sampling error, in preparation for meaningful analysis of the data." While I agree with this statement, in that its main inference is directed towards the test of an hypothesis, I also believe that in certain cases statistics can be used to guide an experimenter in constructing an experimental design.

A good example occurs in the area of research in anxiety and motor behavior. Just recently at the Annual Canadian Psycho-Motor and Sports Psychology Symposium, Dr. Rainer Martens presented a review of published experiments that had been concerned with the relationship between the Manifest Anxiety Scale (MAS) and motor behavior.[1] One of his main conclusions was that the relationship between these two variables was unclear in that several studies demonstrated a relationship, several more showed no relationship, while the results from still others produced mixed results. One thing that the majority of these studies had in common, however, was their experimental design. Almost without exception these studies entailed the administration of the MAS to a large sample of subjects and then through use of these scores, the upper and lower ten percent of the subjects were selected for testing on some criterion which, in this case, was usually a motor task. The data derived from the motor task were then put through a t-test for a difference between means and the results interpreted in terms of some theory.

The experimental designs of these experiments are no doubt valid and it is not until the statistical concept of power is considered before one can appreciate a potential bias in all these studies. Leonard Feldt,[2] in *Psychometrika*, presented some data on the use of the extreme group design in relation to the number of subjects that each group should have so that maximum statistical power can occur when a simple t-test is used to test the difference between means.

Before turning to his results let it be realized that at a given level of significance the power of the test is dependent upon: 1) the size of the extreme groups; 2) the variability of the criterion scores within each group; and 3) the magnitude of the true difference between the criterion scores of the extreme groups. Further, since the criterion scores are a function of the initial MAS scores, when power is calculated the magnitude of the correlation expressing the relationship between these two variables must be taken into consideration.

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[1] R. Martens, "Anxiety and Motor Behavior," Paper presented at the Second Annual Canadian Psychomotor and Sports Psychology Symposium, Windsor, Ontario, October, 1970.

[2] L. S. Feldt, "The Use of Extreme Groups to Test for the Presence of a Relationship," *Psychometrika*, 1961, 26, 307-216.

Feldt revealed that for a wide range of correlations between a classification variable and criterion the optimum power of a t-test was achieved with a relatively constant percentage of Ss in each extreme group. He showed that extreme groups of from 25-27% at each end of the MAS distribution provide the most powerful test when P varied between .10 and .60. This percentage is a far cry from the figure of 10% reported by Dr. Martens to be the typical size of most extreme groups used in studying the MAS! Thus, from the preceding, one conclusion that could be drawn is that the relationship between MAS and motor behavior has not been investigated with statistical tests of adequate power.

The major point I wish to make by the use of the preceding example is that through statistics, some precision in the construction of an experimental design can be gained in a field of investigation. However, this still does not deny Dr. Henry's main theme that statistics are only a tool and are not a substitute for a scientist's theoretical insight.

This last statement brings me to my second point of discussion in replying to Dr. Henry's paper. Dr. Henry previously asked the question: "How does one generate the theoretical ideas and/or mathematical models that are required for the *theoretical* rather than *statistical* design?" While I agree that there is no simple answer, I think that a large amount of research design in physical education could be guided by the principles alluded to by John Platt in an article in *Science*, entitled, Strong Inference.[3]

Platt begins by assuming that not every scientist's method of study is as good as every other scientist's. He cites as evidence for this statement the fact that some fields of science are progressing at a much faster rate than others. Platt dismisses such factors as the tractability of the subject matter, the quality or education of the men in the profession, and the size of research grants, as accounting for these differences and suggests that the primary factor causing scientific advance is an intellectual one. In particular, Platt believes that rapidly advancing fields are characterized by scientists who use an accumulative method of inductive inference that is so effective that he gives it the name of "strong inference." In essence, strong inference is nothing more than the simple method of inductive inference but Platt believes that strong inference is different because of its systematic application.

Strong inference consists of applying the following steps to all problems: 1) devising alternative hypotheses; 2) devising a crucial experiment with alternative possible outcomes, each of which will, as nearly as possible, exclude one or more of the hypotheses; 3) carrying out the experiment so as to get a clean result; and 4) recycling the procedure, making subhypotheses or sequential hypotheses to refine the possibilities that remain.

The reason the above method is so strong is that steps 1 and 2 require cleverly chosen intellectual inventions so that hypothesis, experiment, outcome and exclusion will all be related. This last process, that of exclusion, cannot be overemphasized. Any conclusion that is not an exclusion must be doubted. In other words, if a study or a theory does not reject or exclude some previous "knowledge," they must be suspect as to their contributions to the advancement of knowledge. An appropriate comment at this stage is a quote from Francis Bacon which Platt describes. It is: "To man it is granted only to proceed at first by negatives, and at last to end in affirmatives after exclusion has been exhausted."

To put it another way, a hypothesis that cannot be refuted does not serve to advance knowledge. For a hypothesis to be useful it must be possible to falsify it by empirical evidence or experience.

The last part of Platt's paper deals with the question of how we can learn this method and teach it. He outlines several formal ways in which it can be learned but I think the method that he refers to as "The Question" serves the purpose just as well. It can be applied to your own thinking as well as to that of others. The Question simply consists of asking yourself or a "friend," on hearing an explanation or theory put forward "But sir, what experiment could disprove your hypothesis?"; or, when you hear an experiment described, "But sir, what hypothesis does your experiment disprove?"

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[3] J. R. Platt, "Strong Inference," Science, 1964, 146, 374-353.

As Platt mentions, these question "go straight to the heart of the matter. It forces everyone to refocus on the central question of whether there is or is not a testable scientific step forward."

Ross' Reaction to "Theoretical vs Statistical Design of Experiments"

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Our speaker's reference to worship at the altar of the significance, reminds me that in some churches there are two pulpits. When I asked the reason for this, I was told it was traditional. In the early history of the church, the lesson was read to the converts from one pulpit and from the other, the gospel was preached to the heathens. With concurrent meetings of this association and the impact of the Henry paper, I am sure the heathens are meeting elsewhere.

My lesson therefore is concerned with the need to examine physical development phenomena in terms of theoretical and experimental considerations. To date, our approach in physical education has been largely cross-sectional. We have designed various tests; concerned ourselves with their validity, reliability, objectivity, economy and feasibility, and have developed cross-sectional norms. In Canada, for example, we now have national norms based on reasonably good sampling of physical performance and work capacity tests for children and youths, age 7 to 17 years and adults, age 18 to 48 years.[1-3,4]

I do not want to depreciate these studies. They are vast in scope and provide an important dimension in evaluating human resources. They greatly facilitate a variety of comparative studies and have obvious professional and educational implication.

Moreover, cross-sectional sampling studies on successive occasions may eventually be used to determine secular trends and evaluate changing status. For these kinds of concerns, the conventional null hypothesis and t and F tests may be used advantageously.

We ought not to delude ourselves that cross-sectional data permit us to elucidate growth and development phenomena. Distance, velocity and acceleration curves derived from average values from such cross-sectional data are erroneous. They are misleading because of the maturity variance present at each point on the curves. Individual height velocity curves show the growth spurt at adolescence as a mountain peak whereas velocity curves based on cross-sectional data misrepresent this dramatic event as a flattened hill.

The kind of data which really illuminates growth and developmental phenomena is from some sort of longitudinal design. An early example of longitudinal design with typical distance and velocity stature curves is based on data from de

Montbeillard's son during the years 1759 and 1777 as reported by Tanner.[4] The elaboration of the longitudinal approach with pure and mixed design is exemplified by the Saskatchewan Growth Study which provides for a pure longitudinal element for boys and a replacement for losses with girls to provide for a mixed-longitudinal element for girls.

Even with such excellent data, there are a number of influences which must be recognized:

1) Growth Trend
2) Time of Measurement Component
3) Seasonal Component
4) Cyclic Component
5) Identifiable Incidental Component
6) Secular Trend
7) Residual Component

This latter component also includes both systematic and random error which are major problems in longitudinal studies, especially when different personnel obtain the data.

When properly evaluated pure longitudinal or adjusted mixed-longitudinal designs[5] should provide the best framework to view experimentally induced change by identifiable physical activity. In addition, there are some purely geometric relationships with increasing body size which may be used to construct theoretical models to predict growth for static and functional body dimensions. These geometric appreciations are hardly new. Jonathan Swift[6] in 1729 had Gulliver, upon being given his liberty, sign an agreement to render certain services, and in return as specified in the last article he was to be given a daily allotment of meat and drink equivalent to that of 1728 Lilliputian's. Sometime after, Gulliver learned this figure was arrived at by the court mathematicians who found his height exceeded the Lilliputian's in the proportion of 12 to 1, and concluded from the similarity of their bodies, that his must contain at least 1728 of theirs and would require as much food as was necessary to support that number of Lilliputians. His interpretation relating size and volume is correct but his estimation of metabolic cost in in error.

Theoretically, one should expect as Swift did that with increase in height certain volumes should increase linearly with the third power of this growth. If we assume that humans, irrespective of their size, are geometrically similar and their composition relatively constant, and height L used as the basic expression of size, it follows that all linear dimensions in the body are proportional to height L, all areas to L^2, and all volumes and weights to L^3. A recent WHO scientific group report on Optimal Physical Performance Capacity in adults PPC[7] reaffirms these basic relationships and points out the following:

"Physiological and anatomical measures such as body surfaces and intestinal surfaces will increase with body height in proportion to L^2. Sectional areas of, e.g., the muscles, vary in the same way, and a function like muscle strength also increases with L^2. Volumes such as lung volumes, heart volumes, and blood volumes and weights such as total body weight, muscle mass, and limb mass vary with L^3. In functions expressed per time T unit, as in heart frequency, respiratory frequency, and aerobic power, it follows that T must be proportional to L from the equation $f = mxg$, expressed on a dimensiunal scale with f (muscle force) proportional to L^2, m (mass of heart, limbs, etc.) proportional to L^3, and g proportional to LxT^{-2}.

In running, for instance, step length must be proportional to L but the time used for each step is also proportional to L. Step frequency will consequently be proportional to L^{-1}, and the speed of running (= step length × step frequency) will turn out to be independent of height.

Whether a similar simple relationship holds for aerobic power (ml. second) has not been clarified. If it does, aerobic power should be expected to be proportional to $L^2(L^3/L)$, and the proper way of expressing its relative value should not be per kg body weight or lean body mass, but rather per m^2 body surface or per body height squared.

These theoretical considerations are meant to emphasize the importance of the effect of body size on PPC and of choosing the right parameters in expressing the relative values of PPC."

Ekblom[8] in looking at the effect of physical training on the oxygen transport system of adolescents abandoned the traditional statistical analysis and used longitudinal growth curves and theoretical relationships as discussed above to elucidate growth and training effects. The study does not have the neatness of a cookbook statistical design, but it is highly relevant to the problem and helps get at basic biological phenomena. Even though we might not necessarily agree with his interpretations, we must admit that this kind of design invites further study. It does not have the cloture effect Ekblom might have achieved if he had used a sterile t or F test design.

Longitudinal study which necessitates holding subjects to experimental and control conditions for a number of years, is not an attractive prospect. It is, however, essential to get at the nature of growth and development and the effects of physical activity. Our speaker's charge to us this morning is not merely an invitation to use a different method of analysis, but an appeal to undertake monumental research tasks.

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Mathematical Model of the Time Patterns of Oxygen Consumption During Exercise and Recovery

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Abstract

Henry showed in 1951[1] and 1956[2] that the observed time pattern of O_2 consumption during light and moderate exercise and recovery was adequately described by a mathematical model involving fast "alactic" and slow "lactic" components. The rate of O_2 consumption at time t of exercise is represented in the model as $Y_t = C - (a_1e^{-k_1t} + a_2e^{-k_2t})$, where the exponential terms represent the amounts of current O_2 income being used for aerobic production of adenosine phosphates and concurrent oxidation of lactate. During recovery, the negative term changes to positive, $a_1 + a_2$ represents the amount of O_2 income at the start of recovery, and the exponentials represent the O_2 being used to pay off the alactic and lactic debts.

One of the basic concepts of the model is that increased O_2 consumption resulting from the performance of work can be characterized as involving a mass-action hypothesis; NAD-2H is assumed to unload H chiefly to the flavo-proteins so long as the capacity of the terminal oxidation system including the current O_2 supply is not challenged. Thus each time unit of work results in a unit amount of oxidizable H atoms that come from the production of adenosine and creatine phosphates. But some H always follows the branch line reaction 2H + pyruvate → lactate; the amount progressively increases as the activity of the flavoprotein-cytochrome system gradually levels off in its approach to maximal functioning. As soon as blood lactate increases slightly, a portion is aerobically metabolized in the liver and possibly in inactive muscles, accounting for the slow component of the O_2 consumption curve during exercise. During recovery muscle contractions are no longer causing the production of new H. The amount remaining in the system at the end of work passes down to the site of O_2 scavenging, decreasing a constant proportion per unit time as determined by the term ae^{-k}.

Questions may be raised concerning the utility of the above model for heavy exercise and subsequent recovery in accounting for the observed time patterns of min-by-min O_2 intake. In addition various other factors may influence the form of both the O_2 income and O_2 debt curves, such as the difference in amount between the O_2 debt and deficit (discrepancy), the O_2 cost of ventilation and the O_2 cost of the heart. The present experiment attempts to quantify the influence of these factors in heavy exercise.

Thirty-three subjects on two occasions performed 10 minutes of constant-load work at 1080 kgm/min on a bicycle ergometer. Oxygen consumption was measured during each minute of exercise and for 15 minutes of recovery using open-circuit spirometry. The O_2 cost of ventilation during exercise and recovery was

calculated from Cournand's regression line of O_2 consumption per amount of ventilation as presented by Shepard.[5] This log-by-log linear line was extended somewhat to cover the range of ventilation as measured in our experiment. The Cournand line was chosen because it seemed to represent a close approximation to a median value of the 9 studies displayed in Shepard's Fig. 2, both as to the O_2 cost of ventilation and the slope of the line. In our calculations, the net O_2 cost of ventilation was computed by subtracting the resting O_2 cost of ventilation (6ml/min) from the gross O_2 cost per minute. The adjusted income values were obtained by subtracting, min-by-min, the O_2 cost of ventilation for that minute from the O_2 intake during each minute of exercise and each minute of recovery. To get adjusted deficit, for example, one sums the 10 min-by-min adjusted intake values, which total 22.045 L and subtracts this from 10 x the adjusted steady-state rate (25.440), to get an adjusted deficit of 3.395L. For the unadjusted values, one sums the 10 min-by-min-by-min intake values (24.685 L), and subtracts this from 10 x the steady-state rate (29.020 L), which gives a deficit of 4.335 L. The unadjusted and adjusted debt data were calculated in a comparable manner. The asymptote was subtracted from each minute of debt payoff using the adjusted asymptote for the adjusted debt (Table 1). Wilmore (personal communication) thinks that since we subtracted the breathing cost min-by-min from measured income to get adjusted income, we should have adjusted by subtracting this same value from the original steady-state O_2 requirement. We believe this would be wrong; the adjusted income at the steady-state (which we used) is the correct basis for the adjusted steady-state estimate. Using his method to adjust the deficit (i.e., subtracting the ventilation cost from the unadjusted income and then adding it back again), would not make any adjustment. The following results were obtained:

1) Min-by-min O_2 consumption during exercise and recovery was accurately predicted by the mathematical model. The correlations between observed and calculated values is $r = .980$ for exercise and .999 for recovery, with $S_e = 0.062$ and 0.012 liters, respectively.
2) The chief influence of the O_2 cost of ventilation, as computed from Cournand's regression line of O_2 per amount of ventilation, was on the deficit during exercise (22%); it had relatively little effect on the debt (11%) since ventilation recovery is rapid. Ventilation in exercise and recovery can also be accurately described by a two-component exponential curve system.
3) When corrections for the O_2 cost of ventilation are used to calculate net values for deficit and debt, the ratio of debt to deficit is greater than unity and the discrepancy is 0.90 L ± 0.012 (Table 1). It can be calculated from the model that an additional 15 minutes of recovery would add 0.72 L to the discrepancy when the necessary corrections are made for the O_2 cost of ventilation. The correlation between individual differences in deficit and debt is $r = .78$.

TABLE 1. Income, debt, deficit and discrepancy, and influence of O_2 cost of ventilation.

O_2 Measure, L/Min	Unadjusted	Adjusted	Net V_E Cost
Steady State	29.020 ± 0.267*	25.440	3.580
Income	24.685 ± 0.197	22.045	2.640
Deficit	4.335 ± 0.124	3.395	—
Debt	4.822 ± 0.132	4.290	0.532
Discrepancy	0.487 ± 0.012	0.85	—

* Standard error of the mean. The steady-state values are the rates per minute multiplied by the duration of exercise.

4) The estimated myocardial O_2 cost[4] during 15 minutes of recovery is approximately 0.114 L O_2 in excess of resting. At best, this is a trivial amount compared with the observed debt of nearly 5 L.

Summarizing the implications of the above, it would seem that the factors other than genuine O_2 debt that have been postulated as responsible for the excess O_2 consumption of recovery (i.e., changing temperature, hormonal influence and myoglobin-hemoglobin storage) are probably of little importance, since there is little quantitative thermodynamic or biochemical evidence establishing their role, with the exception of the O_2 cost of breathing. (For example, if metabolism is indeed increased by temperature *per se*, then what biochemical process accounts for hydrogen atom production and its subsequent combination with molecular oxygen in the absence of ATP production?)

Further, there are some who have argued that the discrepancy is caused by the O_2 cost of ventilation. In contrast, we have found that the cost disturbs the discrepancy (significant at the .05 level), but in this framework whether this amount is statistically significant or not is of little useful physiological information, since the amount is small, and is apparently not responsible for the deficit-debt discrepancy. The "real" discrepancy is increased because of the O_2 cost of ventilation, quite independently of whatever statistical level of probability is selected.

The above results are in accord with theory, namely a proposed mass-action hypothesis (in contrast to a 2-stage concept associated with Margaria,[3] in which the deficiency between requirement and income is thought to be activated by an alactic mechanism until it reaches capacity (1.4 or 1.5 L) and then is "switched" off by a lactic mechanism which comes into play and supplies the energy for the deficit), to account for the time patterns and quantitative amounts of O_2 income during exercise and recovery. The decision favoring the mass-action rather than the "2-stage" concept is based on the use of quantitative amounts and relations which seem to underly the particular phenomena involved, not whether the one or the other is governed by the assumptions underlying the t-ratio or variance analysis.

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Wilmore's Reaction to "Mathematical Model of the Time Patterns of Oxygen Consumption During Exercise and Recovery"

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I would first like to formally comment on the excellent presentation yesterday by Professor Henry which formed the theoretical basis for the paper which has just been presented. I am in total agreement with his condemnation of those who are firmly entrenched in the cult of the statistically significant. For the majority of the research being conducted today in physical education, the theoretical rather than the statistical approach to experimental design is necessary. I am always at first irritated, and then amused at statements like the following: "A highly significant correlation at the .05 level, was found between the pulse rate recovery score following a submaximal step test and the maximal oxygen uptake." What does this statement really mean, particularly when the actual correlation coefficient is not presented? Very simply, it means that a relationship exists between these two variables. But that is all that it means, since it cannot imply the magnitude of the correlation or the strength of that relationship. A correlation of .19 would be significant at the .05 level for an $n = 100$, but it wouldn't indicate a very substantial relationship.

Back to the task at hand. The paper just presented by Dr. Katch and Dr. Girandola is an excellent application of the theoretical paper presented by Professor Henry. They have demonstrated that carefully collected physiological data from a controlled exercise bout will conform very precisely to a predicted theoretical curve. Just as importantly, they have presented data that extend the earlier work of Henry and his colleagues, showing that oxygen uptake during and following heavy work falls under the same mechanisms of physiological control as oxygen uptake during work of a light to moderate intensity. Unfortunately, however, the authors have diluted their primary effort by involving themselves in too many side issues for which they have little or no supportive data, and which are only remotely related to the problem at hand.

At this point, I would like to react to several specific aspects of this paper. First, the curves presented in this paper are perfect examples of how physiological data can be expressed in a precise mathematical manner. The ability to use objective mathematical relationships to accurately quantify various physiological responses, enables the researcher to come to a much better understanding of the underlying biochemical and physiological processes. One must still be careful, however, not to go beyond the limitations of his data when he gets into the interpretative aspects of the study.

Looking at the basic physiological problem involved in this study, i.e., understanding the significance of the oxygen consumption curve during exercise and recovery, I agree with the authors in that they have successfully demonstrated the existence of a real oxygen debt. This is contrary to the conclusions of LUKIN and RALSTON (Arbeitsphysiol., 1962) and Alpert and his co-workers (Ann. N.Y. Acad. Sci., 1965) that oxygen consumption during recovery from exercise is a random phenomenon which is uncorrelated to precise biochemical and physiological events. The point the present authors make concerning the use of mean scores to better observe meaningful patterns as opposed to the gross irregularities noted in the observations of curves generated on single individuals, is quite valid and needs further emphasis. We are too often confused by looking at the data on a single individual, primarily because of the many artifacts associated with our procedures and methodology.

I must now take issue with several points made in this paper. First, the basic concept of the alactic debt model which they present attempts to account for the oxygen deficit and alactic oxygen debt almost solely on the basis of accumulating and reducing hydrogen, with the subsequent scavenging of hydrogen by oxygen to form water. The statement was made: "... during work at less than crest load, the oxygen consumption at any moment is determined by the amount of H passing through the flavoprotein-cytochrome system." This statement in itself is correct, but the implication is that the initial lag in oxygen transport during the first few minutes of the exercise is due to a lack of oxidizable substrate. Likewise the recovery oxygen curve is governed by the amount of substrate present. This concept doesn't seem to agree with what we know now concerning the rate of reaction of various biochemical processes. In an exercise of constant intensity, the production of oxidizable substrate is theoretically constant throughout the exercise. Thus, the factor limiting the rate of reaction would more likely be the inability to transport oxygen to the active site, i.e., an oxygen lack rather than a substrate lack would account for the initial lag in oxygen uptake. This would then be more of a circulatory phenomenon which is in basic agreement with the recent work elucidating the mechanisms responsible for controlling both the heart rate and ventilation volumes during the initial stages of exercise.

Likewise, using the same concept of substrate availability to describe the alactic oxygen debt is equally hazardous. The authors have attempted to show that factors other than what they refer to as "genuine oxygen debt" are probably of little importance. They have looked at several of these factors individually and passed off additional factors as being inconsequential. Astrand (Textbook of Work Physiology, 1970) has demonstrated that of a theoretical maximal alactic debt of 4.0 liters, between 2 and 2.5 liters of this debt are attributable to factors which have nothing to do with the energy transfer in dealing with anaerobic end products.

More specifically, Riley (Medicine and Science in Sport, 1960) has estimated that at a ventilation volume of 50 liters/minute, the oxygen cost of breathing is 50 ml/min, and the cost of pumping blood is 200 ml/min at a cardiac output of 20 liters/min. The cost of breathing increases exponentially as the volume increases, reaching values in excess of 1 liter of oxygen/min. for ventilation volumes of 130 liters/min. Welch, et. al. (Med. Sci. in Sports, 1970) estimate a cost of 1.5 liters of oxygen for volumes in excess of 150 liters/min. It has also been shown that a substantial arterial desaturation occurs during the later stages of heavy exercise. Using the data of Rowell, et. al. (J. Appl. Physiol., 1964) assuming a blood volume of 6 liters and a change in saturation from 98 percent to 85 percent, approximately 200 ml of oxygen would be needed to bring the saturation back to 98 percent, which typically occurs during the initial minute or two of recovery. Also, it has been estimated that an additional 200-300 ml of oxygen are necessary to replenish the muscle myoglobin immediately following exhaustive exercise.

Contrary to the authors' statement, abundant data are available regarding the influence of increased body temperature and increased hormone levels on the basic metabolism. A 1°C increase in body temperature is known to elevate the metabolic rate by 10-15 percent. With the temperature in active muscles increasing by 2-3°C in heavy work of a duration comparable to the present study, it is conceivable that the factor of increased temperature could account for an additional 300-500 ml of oxygen. Barnard and Foss (J. Appl. Physiol., 1969) have shown that by blocking the normal catecholamine response to exercise with a

Beta-adrenergic blocking agent, the subsequent alactic portion of the oxygen debt was reduced by 29 percent. Taken separately, each of these factors is relatively small and unimportant. However, when taken as a group, it is possible that they might account for nearly 50 percent of the total alactic debt.

Lastly, I would like to take issue with the authors' interpretation of the discrepancy between oxygen deficit and debt. First, when working with net oxygen uptake, you are necessarily confined in your interpretation to the baseline you accept, to which the post-exercise oxygen uptake must return. There can be a 100-200 ml variation in the pre-exercise resting oxygen uptake determination within the individual. An increased body temperature as a result of the exercise can keep the post exercise oxygen uptake elevated 30-50 ml/min, assuming approximately a 1°C elevation in body temperature. As a result of these and many other factors, it becomes a real problem to know when to terminate the oxygen debt measurement. An error of just 50 ml/min in selecting the appropriate baseline results in an excess of 1 liter oxygen debt over a 20 minute period. In the present study, that would amount to 20 percent of the total debt. Considering that there was only .500 liters discrepancy between the deficit and debt in the present study, this factor must be weighted and controlled very carefully.

A second factor not usually considered when investigating the possible causes for the discrepancy between oxygen debt and deficit is the fact that the individual is probably less efficient mechanically during the first minute or two of exercise. Thus, the oxygen requirement for this part of the exercise will necessarily be elevated above that which is considered to be the oxygen requirement at the steady-state. This factor could not affect the deficit as it is presently calculated but would be reflected in the measured oxygen debt. The magnitude of this factor is unknown at the present time, but conceivably could amount to 10-15 percent of the predicted oxygen requirement for the exercise.

The authors have attempted to bring the cost of ventilation into the calculation of debt and deficit to demonstrate how this only increases the ratio between the two. I seriously question the fact that they have subtracted the oxygen cost of breathing from the exercise oxygen uptake without also subtracting the same value from the steady-state oxygen requirement. If they would have done this, they would have found that their deficit would have remained essentially the same while the debt decreased by about 500 ml. Thus, the debt/deficit ratio would have decreased rather than increased.

In conclusion, it is obvious that we are talking about a very complex area in exercise physiology, in which there are many questions but very few answers. Before we spend much more time on detailed curve analyses of exercise and recovery oxygen data we must, as Tipton and Barnard (Athletic Institute *Symposium on Oxygen Debt*, 1967) have indicated, gain a much better understanding of what is happening at the cellular level. For example, we seem to ignore the fact that peak lactate values appear some 4-7 minutes post-exercise when we attribute the smooth slow component of the oxygen debt curve to the lactate mechanism. Likewise, we have failed to account for the role of fat metabolism during exercise and recovery, on the subsequent oxygen debt curves. Fat has been demonstrated to account for over 50 percent of the energy expended in various types of exercise, and yet the free fatty acids are degraded totally aerobically by joining the metabolic chain at the level of Acetyl Co-A. Certainly, additional research of a very comprehensive nature is necessary before we can completely understand the mechanisms underlying oxygen debt.

SOCIOLOGICAL RESEARCH THEORY

The Nature of Sociological Theory and Its Import for the Explanation of Agônetic Behavior[1]

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At the 67th annual meetings of the NCPEAM Professor Franklin M. Henry delivered a paper titled: "Physical Education—An Academic Discipline."[2] He boldly stated that "there is indeed a scholarly field of knowledge basic to physical education";[3] and concluded with the observation that "if the academic discipline of physical education did not already exist, they would be a need for it to be invented."[4] Since the presentation of Dr. Henry's paper there has been considerable discussion and debate among physical educators at convention sessions, at special conferences, and in professional journals concerning the domain of physical education as an academic discipline. But to date, no general consensus has been reached regarding the theoretical structure of physical education as an area of study and research.

Although there is not full accord among leaders in the field as to the academic nature of physical education, I believe that many of us could reach agreement as to what are the major logical prerequisites for an academic discipline. For example, I think most of us would accept the criteria outlined by Professor Gerald S. Kenyon in a paper presented at the NCPEAM meetings in 1958[5] Dr. Kenyon noted that for a field of study to be classified as an academic discipline it must possess: (1) a particular *focus of inquiry*, (2) a particular *mode of inquiry*, and (3) an unique *body of knowledge*.[6] These three dimensions of any given discipline are, of course, characteristic of all special subdisciplines within it.

SOCIOLOGY OF SPORT

This morning I wish to focus attention on one specific subdiscipline of an academic discipline of physical education;[7] namely, the sociology of sport.[8]

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[1] The term "agonetic behavior" is used in preference to "sport" to refer to the many and diverse forms of manifest and latent human conduct associated with public and private athletic contests.

[2] Franklin Henry, "Physical Education—An Academic Discipline," *Proceedings of the 67th Annual Meetings of the NCPEAM* (Jan. 8-11, 1964, Dallas, Texas) 6-9.

[3] *Ibid.*, p. 7.

[4] *Ibid.*, p. 9.

[5] Gerald S. Kenyon, "On the Conceptualization of Sub-Disciplines within an Academic Discipline Dealing with Human Movement," *Proceedings of the 71st Annual Meetings of the NCPEAM* (Jan. 12, 1968, Houston, Texas) 34-49.

[6] *Ibid.*, p. 37.

[7] The term "Physical Education" is, of course, an awkward label for an academic discipline and a number of alternatives have been proposed in recent years such as Kinesiology and Sport Science.

[8] The nature of the sociology of sport is presented in: Gerald S. Kenyon and John W. Loy, "Toward a Sociology of Sport," *JOHPER* 36 (1965) 24-25, 68-69; and, Gerald S. Kenyon, "A Sociology of Sport: On Becoming a Sub-discipline," in R. C. Brown and B. J. Cratty (eds.), *New Perspectives of Man in Action* (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1969) 163-180.

Definition

The sociology of sport may be defined as the scientific study of the structure and composition, functioning and change of social systems as they relate to human behavior in sport situations.[9] It follows from this definition that the particular focus of inquiry of this subdiscipline is sport,[10] and its particular mode of inquiry is associated with the sociological methods of controlled empirical investigation.[11] As the sociology of sport is in its embryonic state of development it would be presumptuous to speak of its unique body of knowledge.[12] There appears, however, to be no logical *a priori* reasons which preclude its development of a body of knowledge.[13] Moreover, as a scientific subdiscipline it is evident that its body of knowledge will in the final analysis consist of a set of systematically interrelated concepts, propositions, and theories.[14]

Scientific Tasks

In common with scientists in general, sport sociologists have three fundamental tasks to perform: description, discovery, and explanation.

Description (concepts)

Within the sociological perspective, description refers to the process of defining and describing particular social phenomena. Sport sociologists specifically seek to describe the nature (i.e., the properties, problems and processes) of social systems associated with sport. The process of sociological description is dependent upon the development of concepts.

Discovery (propositions)

In the context of sociological inquiry, discovery refers to the finding of more or less general relationships between properties and/or processes of social systems. Discoveries resulting from sociological inquiry are stated as propositions.

Explanation (theories)

The discovery of relationships between properties and processes of social systems is just the beginning of scientific exploration. The most crucial task of sociological inquiry is to account for discovered relations by means of scientific explanations. Most simply expressed, a scientific explanation consists of deriving (deducing) a proposition from a theory.

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[9] The term "sport involvement" may be substituted for the phrase "human behavior in sport situations." The nature of sport involvement is treated in Gerald S. Kenyon, "Sport Involvement: A Conceptual Go and Some Consequences Thereof," in G. S. Kenyon (ed.), *Aspects of Contemporary Sport Sociology* (Chicago: Athletic Institute, 1969) 77-84.

[10] The author's personal perspective of sport is given in: John W. Loy, "The Nature of Sport: A Definitional Effort," *Quest* 10 (May 1968), 1-15.

[11] There are many texts which describe the methodology of sociological inquiry. A good overview is provided in Claire Selltiz and others, *Research Methods in Social Relations* (New York: Holt, Rinehart and Winston, Inc., 1963).

[12] A fair indication of the state of knowledge of the sociology of sport may be gleaned from John W. Loy and Gerald S. Kenyon (eds.), *Sport, Culture and Society* (New York: Macmillan, 1969) and Gunther Luschen "The Sociology of Sport," *Current Sociology* 15 (1967) 1-140.

[13] See, e.g., Ernest Nagel, *The Structure of Science* (New York: Harcourt, Bruce & World, Inc., 1961) especially pp. 447-546.

[14] For an excellent introduction to the structure of knowledge of scientific disciplines, the reader is referred to: May Brodbeck, "Logic and Scientific Method in Research on Teaching," Chapter 2, pp. 44-93 in N. L. Gage (ed.), *Handbook of Research on Teaching* (Chicago: Rand McNally & Co., 1963).

As theoretical explanation is the hallmark of any scientific enterprise, I shall devote the remainder of my paper to clarifying the nature of sociological theory and to illustrating its import for the explanation of agonetic behavior.

THE NATURE OF SOCIAL THEORY

Before setting forth in full what I believe is the nature of social theory, permit me to make clear what social theory is not.

What Is Not Theory

Perhaps because of their catholic taste, but more likely due to the essential shallowness of their subject matter, professional physical educators have nondiscriminately applied the term "theory" to nearly every phase of their programs, practices and publications. Theory has been used in reference to such diverse concerns as: (1) methodological practices, (2) analysis of concepts, (3) general orientations, (4) empirical generalizations, and (5) model building.[15]

Methodology

I offer as a sociological proposition the statement that: "for any given field of study, the degree of concern with methodology is inversely proportional to academic status." A colloquial corollary of this proposition is the expression: "trades have technicians, disciplines have theoreticians." Physical educators' madness with method certainly provides empirical support for these assertions.

Not only are physical educators doubly obsessed with methodology, but they appallingly apply the appellation "theory" to both of their joint methodological concerns. On the one hand, physical educators are concerned with pedagogical methodology as reflected in such curriculum offerings as: "modern dance theory," "theory of teaching team sports," and "theory of basketball coaching." On the other hand, physical educators are concerned with research methodology as reflected in such curriculum offerings as: "measurement theory and human movement research," "exercise instrumentation theory," and "theory of research design." Needless to say, in the first instance, teaching techniques do not constitute scientific theories. And in the latter case, it should be evident that knowing how to test something is not the same thing as knowing what to test.

I don't mean to disparage intense interest in research methods as scientific knowledge is likely to be only as reliable and valid as the methods used to acquire it. However, if for no other reason than clear communication, I think it would behoove scientifically-oriented physical educators to refrain from mixing the processes of inquiry with the products of inquiry by encompassing both the means and ends of scientific investigation under the rubric of theory.

Concepts

Hardly a year passes that some authority in our field does not allude to the matter of theory building in physical education. Although these annual allusions are often alluring they usually amount to nothing more than a plea for, or an attempt at conceptual analysis. Thus we have a spate of theoretical treatises on such topics as: "what is physical education," "what is the nature of human movement," "what is fitness," and similar issues.

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[15] My treatment of "what is not theory," closely parallels Robert K. Merton's essay on "The Bearing of Sociological Theory on Empirical Research," Chapter 2, pp. 85-117 in Robert K. Merton, *Social Theory and Social Structure* (New York: The Free Press, 1957).

To be sure, concepts are important in theory building, in that, propositions state relationships between concepts, and theories state relationships among propositions. "But an array of concepts . . . does not constitute theory, though it may enter into a theoretic system."[16]

General Orientation

Much, if not most, of what is labelled "theory" in physical education consists of general orientations toward the field. Examples of these general orientations are displayed in the many textbooks describing the principles and foundations of physical education. Thus we have at least one text titled the "theory of physical education" and numerous references to "movement theory," "play theory" and the "theory of sport." I don't wish to decry the significance of such conceptual efforts, but wish to emphasize that it is rather facetious, scientifically speaking, to term such work theory.

General orientations toward the field serve to clarify central concepts and give systematic classification to groups of core concepts in the form of typologies and taxonomies.[17] These classification schemes provide useful orientating statements about the locus, context and methods of inquiry of a particular discipline or subdiscipline. They serve to outline a domain of study, give a perspective from which to view it, indicate its crucial variables and suggest how these variables should be empirically treated. However, in the final analysis one must recognize that the frames of reference underlying general orientations are largely devoid of either empirical or theoretical content.

Empirical Generalizations

Perhaps the greatest contribution to date to the body of knowledge of a discipline of physical education is the many empirical generalizations resulting from the research of physical educators since the turn of the century.[18] These empirical generalizations, however, constitute only a miscellaneous matrix of propositions since they have not been integrated into any theoretical structure. Thus, they should not be associated with the term theory. As Merton observes: "the theoretic task, and the orientation of empirical research toward theory, first begins when the bearing of such uniformities on a set of interrelated propositions is tentatively established."[19]

Models

The closest physical educators have come to developing theories is their construction of conceptual models. Ideally viewed, "a model is a conceptualization of a group of phenomena, constructed by means of a rationale, where the ultimate purpose is to furnish the terms and relations, the propositions, of a formal system which, if validated, becomes theory."[20] Regretfully, most models developed to date in physical education are nothing more than theoretical and/or empirical typologies with associated definitions and assumptions. I say "regretfully," because these models are barren of deductive implications and possess little explanatory power.[21] More unfortunately, although there are important distinctions between models and theories, physical educators often use the terms synonymously. Or to put things more precisely, physical educators typically label their models theories.[22]

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[16] *Ibid.*, p. 89.

[17] Examples of such taxonomies include: Camille Brown, "The Structure of Knowledge of Physical Education," *Quest* 9 (Dec. 1967) 53-67; and Marlin M. Mackenzie, *Toward a New Curriculum in Physical Education* (New York: McGraw-Hill, 1969) Especially p. 17.

[18] Most of these empirical generalizations result from work in exercise physiology and to a lesser extent work in motor learning. Although a number of these generalizations possess profound implications most are trivial in nature as for example the statement: "oxygen uptake increases as a function of exercise."

[19] Merton, p. 95.

[20] David Willer, *Scientific Sociology* (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1967) p. 15.

Summary. No doubt many members of the audience would contend that in going to such length to depict what is not a theory I have merely fired a barrage of trivial verbal pot shots at a semantical straw man. I argue, however, the use of the term "theory" is not an idiosyncratic matter in scientific discourse and that physical educators have performed a great disservice by rendering the term virtually meaningless in labelling such a wide range of professional concerns theory.

What Is Theory

Having castigated physical educators for their many misnomers in reference to theory, I must embarrassingly report that sociologists also have been very liberal in their use of the term. The debate of sociologists concerning theory, however, is one of degree rather than kind. On the one hand, sociologists, in general, accept the ideal criteria of theories as espoused by natural scientists and philosophers of science.[22a] On the other hand, they admit that they have few if any theoretical works which comply with such criteria, and thus are willing to accept in varying degree less formal conceptual efforts as "theory." In sum, in view of the present state of scientific sophistcation of sociology it may be best to think of social theories in terms of a continuum. As Abel has recently stated the case:

> All theories fall between the two extremes of a simple explanatory principle and a deductive system with an abstract relational structure formed by theoretical postulates. It makes little sense, however, to discriminate between theories that are at different points along the continuum -for example, to criticize theories in the social sciences because their explanatory and predictive powers are more circumscribed and less precise than those of the physical sciences are. All positions on the continuum can be accepted as equally significant, provided it can be shown that the proponents of a theory have done their utmost to make the explanation as good as available data and techniques permit.[22b]

Definition

A definition which I believe characterizes all theories on the continuum proposed by Abel is Rudner's statement that: "*A theory is a systematically related set of statements, including some lawlike generalizations, that is empirically testable.*"[23]

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[21] I do not wish to discourage model construction by my comments and in fact continually beg my students to have a go at model building. Two examples of model construction in physical education which are correctly labelled as such are: Valerie Hunt, "Movement Behavior: A Model for Action," *Quest* 2 (April 1964) 69-91; and, Gerald S. Kenyon, "A Conceptual Model for Characterizing Physical Activity," *Research Quarterly* 39 (1968) 96-105.

[22] See, e.g., Bryant J. Cratty, "A Three-Level Theory of Perceptual-Motor Behavior," *Quest* 6 (May 1966) 3-10; and, Franklin M. Henry and Donald E. Rogers, "Increased Response Latency for Complicated Movements and a Memory Drum Theory of Neuromotor Reaction," *Research Quarterly* 31 (1960) 448-458.

[22a] The "ideal" structure of scientific theories is clearly set forth by Nagel, pp. 79-152.

[22b] Theodore Abel, *The Foundation of Sociological Theory* (New York: Random House, 1970) p. 8.

[23] Richard S. Rudner, *Philosophy of Social Science* (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1966) p. 10.

Analysis of Structure

If one accepts Rudner's characterization of a theory, then: "any given theory is comprised of two sets of statements. One set defines the *concepts* of the theory. The other expresses *relationships* among the concepts defined."[24]

Concepts. A sociological concept is a term taken as a symbol for a social phenomenon. Concepts refer to: '(1) things and properties of things, (2) events and properties of events, and (3) relationships among things and/or events, and their various properties.'[25] The basic concepts employed in social theories are called *variables*. A variable is a concept 'to which numerals or values are assigned.'[26] Variables can be evaluated in terms of their degree of generality, specificity and significance.[27] *Generality* refers to the inclusiveness of the range of social phenomena which a concept encompasses. "Social system," "social structure" and "culture" are examples of sociological concepts having a high degree of generality. *Specificity* refers to the degree to which a concept can be operationally defined and objectively measured.[28] "Socioeconomic status," "political preference," and "sibling position" are examples of sociological concepts having a high degree of specificity. *Significance* refers to the number of propositions a given variable appears in.[29] The concept of "social status," for example, has great systematic import because it appears as either an independent or dependent variable in many sociological propositions.

Propositions. A proposition is an empirically testable assertion of relationship between two variables. Propositions can be evaluated in terms of a number of formal criteria. For example, Galtung suggests that propositions can be evaluated according to their degree of: (1) generality, (2) complexity, (3) specificity, (4) determinancy, (5) falsibility, (6) testability, (7) communicability, (8) reproducibility, (9) predictablility, and (10) tenability.[30] For purposes of this paper I shall follow Zetterberg and simply classify propositions according to their degree of informative value (i.e., explanatory power) and to their degree of empirical support (i.e., research evidence).[31] Zetterberg's typology of propositions is presented in Figure 1. As indicated in the figure, propositions having low informative value are called *ordinary propositions*, wheras propositions having high informative value are called *theoretical propositions*. Only the latter kind of propositions are incorporated into social theories wherein they are referred to as *postulates*.

Theories. As Coleman has written: "all theories may be thought of as consisting of a set of postulates, A, and a set of possible deductions from the postulates, B."[32] The postulates in set A are called axioms, and any proposition

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[24] Clarence Schrag, "Elements of Theoretical Analysis in Sociology," pp. 220-253 in Llewellyn Gross (ed.), *Sociological Theories: Inquiries and Paradigms* (New York: Harper & Row, 1967) p. 225.

[25] Melvin H. Marx, "The General Nature of Theory Construction," Chapter 2, pp. 4-46 in Melvin H. Marx (ed.), *Theories in Contemporary Psychology* (New York: Macmillan, 1963) pp. 9-10.

[26] Fred N. Kerlinger, *Foundations of Behavioral Research* (New York: Holt, Rinehart and Winston, Inc., 1964) p. 32.

[27] Phillips refers to these three dimensions as scope, clarity and systematic import. See Bernard S. Phillips, *Social Research* (New York: Macmillan, 1966) pp. 32-37.

[28] The matter of "operationalism" has been widely debated among social theorists and philosophers of science. See, e.g., Gideon Sjoberg, "Operationalism and Social Research," Chapter 19, pp. 603-628 in Llewellyn Gross (ed.), *Symposium on Sociological Theory* (New York: Harper & Row, 1959).

[29] See Brodbeck (1963) pp. 55-62.

[30] John Galtung, *Theory and Methods of Social Research* (New York: Columbia University Press, 1967) pp. 309-340.

[31] Hans L. Zetterberg, *On Theory and Verification in Sociology* (Totowa, New Jersey: Bedminster Press, 1965) p. 101.

[32] James S. Coleman, *Introduction to Mathematical Sociology* (New York: Free Press, 1964) p. 34.

	Low Informative Value	High Informative Value	
Empirical Support Insufficient	Ordinary Hypothesis (hunch)	Theoretical Hypothesis (theorem)	HYPOTHESES
Empirical Support Sufficient	Ordinary Invariance (finding)	Theoretical Invariance (law)	INVARIANCES
	ORDINARY PROPOSITIONS	THEORETICAL PROPOSITIONS	

Figure 1. Zetterberg's Typology of Propositions*

* Adapted from Zetterberg (1965), p. 101.

derived from the set of axioms is called a *theorem*. Theories can be evaluated in terms of many criteria.[illegible] For purposes of discussion today, I shall confine my comments to three basic but broad dimensions of social theories: generality, formalization and testability. *Generality* refers to the breadth of social phenomena for which a theory can account. A theory of high generality provides a range of many hypotheses. *Formalization* refers to the degree to which the analytical structure of a theory has been explicated. Highly formalized theories reflect symbolization, axiomatization and mathematization.[illegible] *Testability* refers to the degree to which the axioms and theorems of a given theory can be empirically tested. A theory of high testability contains propositional statements which can be easily communicated and readily operationalized. All things being equal, the greater the generality, formalization and testability of a theory, the greater the fruitfulness of a theory. As succinctly stated by Galtung: "a theory is *fruitful* to the extent, many, different and tenable hypotheses may be derived from it." [illegible]

Deductive Theories

The preceding discussion implies that in "ideal form" social theories constitute logical deductive systems. Many leading social theorists have stressed the development of deductive formulations, and several have stated as their ultimate goal the construction of axiomatized deductive systems. Caws has well defined these matters as follows:

> By a *deductive* system is meant any system of interrelated statements such that some of them follow deductively from others; by an *axiomatized deductive system or axiomatized system* is meant a deductive system in which every statement is either an *axiom* not following deductively from any other statement, or a *theorem* following deductively from one or more axioms; and by a *pure axiomatic system or calculus* is meant a system having the logical form of an axiomatic system, but making no reference to its particular contents.[illegible]

[illegible] See, e.g., Galtung's discussion of ten dimensions of social theories, pp. 459-467.

[illegible] See Galtung, p. 462.

[illegible] Galtung, p. 465.

[illegible] P. Caws, *The Philosophy of Science: A Systematic Account* (Princeton, New Jersey: Van Nostrand, 1965) p. 118.

A "pure axiomatic theory" can be verbally expressed in the following propositional form:

AXIOM I: If A, then B.
AXIOM II: If B, then C.
THEOREM A: Therefore, if A, then C.

All other types of axiomatic theories assume the same logical form, but unlike pure axiomatic theories they imply some selected substantive content. Moreover, although there are no fundamental logical differences among various kinds of axiomatic theories, they do, nevertheless, differ according to how they are generated and used.

Explanatory and Synthetic Theories. Coleman distinguishes two general types of axiomatic theories which he respectively refers to as "explanatory deductive theories" and "synthetic deductive theories." [57] In the case of *explanatory theory* construction, social theorists start with a set of empirical generalizations concerning particular social phenomena and then develop a set of postulates from which these generalizations may be deduced. "Testing (such) theory becomes a task of re-examining the prior generalizations for consistency with the theory's predictions, as well as making new predictions and gathering data to test these." [58] The axioms of an explanatory theory are typically untestable as they usually consist of either "hypothetical" concepts or concepts which are operationally undefinable. However, "a great advantage that explanatory deductive theory has over other types of theory is that sometimes a set of untestable postulates can be used to deduce a testable theorem." [59] In the case of *synthetic theory* construction, social theorists take empirical generalizations about particular social phenomena and set them forth as axioms from which theorems can be derived. A special advantage of this type of theory is that "since the axioms of synthetic theories can be tested, verbal synthetic theories can sometimes be translated directly into statistical models such as path analysis." [60]

Critical Comments. I have indicated that many leading theorists within the ranks of social science hold as their ultimate theoretical objective the development of deductive systems. I should note, however, that there are other notable social scientists who seriously question the desirability of developing deductive theories; they argue that there are "better methods" of arriving at "explanation" in the social sciences.[61] In addition to these critics there are others who contend that the debate surrounding "deducibility" as the best means of scientific explanation is a vacuous argument as the development of deductive explanatory systems in the social sciences is virtually impossible.[62] The basic point of this latter critical perspective is that deductive theories in "ideal form" are dependent upon deterministic, causal, and asymmetrical propositions; whereas most propositions in the social sciences are probabilistic and often symmetrical and/or correlative in nature. In brief, propositions incorporated into deductive theories should be universal statements of relation in the form: "if X, then Y;" whereas most sociological propositions take the form: "if X, then probably Y." The long and short of the matter is that it is difficult to derive a valid theorem from a set of axioms composed of "tendency statements." Meehan has well summarized the issue as follows:

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[57] Coleman, pp. 35-54.

[58] *Ibid.*, p. 36.

[59] Kenneth D. Bailey, "Evaluating Axiomatic Theories," Chapter 4, pp. 48-71 in Edgar F. Borgatta and George W. Bohrnstedt (eds.), *Sociological Methodology 1970* (San Francisco: Gossey-Bass, Inc., 1970) p. 58.

[60] *Ibid.*, p. 64.

[61] A succinct critique of the deductivist thesis is given in Merle B. Turner, *Philosophy and the Science of Behavior* (New York: Appleton-Century-Crofts, 1965) pp. 276-292. An example of an alternative to the deductive paradigm is the system paradigm described by Eugene J. Meehan, *Explanation in Social Science* (Homewood, Illinois: Dorsey Press, 1968).

[62] This perspective is clearly presented by Eugene J. Meehan, *The Theory and Method of Political Analysis* (Homewood, Illinois: Dorsey Press, 1965) See especially Chapter 5, pp. 127-168.

> No probabilistic statement can explain a singular event, and no single event can be deduced from a probabilistic generalization. This limits the predictive value of theories that include them, and their usefulness in discovery. Further, since no particular observation suffices to invalidate a theory using probabilistic generalizations, it is more difficult to validate these theories than theories using universal statements. As Braithwaite has shown, a theory that has been rejected on the basis of available evidence may later be reinstated when new evidence is available.
>
> Furthermore, the logical structure of a deductive system that includes probabilistic statements is far more complex than formal deductive logic. This sets practical limits on the number of statements that can be handled with available techniques, and on the usefulness of the results that are obtained.[43]

Notwithstanding the difficulties associated with the development of deductiva systems in sociology and notwithstanding the limitations inherent in the axiomatic theories constructed by sociologists, I would strongly endorse Bailey's statement that: "It would be a *non sequitur* . . . for readers of these critics to assume that axiomatic theories should be rejected by sociologists if their postulates are not stated in causal form." [44] And I am in full accord with his conclusion that:

> Sociologists do not require perfection of their essays or descriptive studies. Neither should they reject all imperfect theory. Such rejection could be fatal to sociology if it discouraged would be constructors of social theory. Surely the tentative acceptance of a deduction whose validity is undertermined is no worse than the acceptance of vague and untestable statements as "theory." Surely imperfect theory is better than no theory at all.[45]

Summary. In this section I have attempted to describe the nature of social theory by providing a general definition and a brief analysis of the structure of sociological theories. I suggested that in view of the present state of scientific sophistication in sociology it is sensible to think of theory in terms of a continuum extending from a simple explanatory principle on the one end to an axiomatic deductive system on the other. The nature of deductive systems was briefly discussed and observations were made as to the difficulties involved in developing such systems. My overall conclusion was that "imperfect theory is better than no theory at all." I shall try to support this rather strong statement by outlining the uses and scientific significance of social theories.

Functions of Social Theories

Theories serve several distinct scientific functions. "Most of these may be summarized by the statement that all theory tends to be *both* a tool and a goal." [46] As Goode and Hatt have written:

> Theory is a tool of science in these ways: (1) it defines the major orientation of a science, by defining the kinds of data which are to be abstracted; (2) it offers a conceptual scheme by which the relevant phenomena are systematized, classified, and interrelated; (3) it summarizes facts into (a) empirical generaliza-

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[43] Meehan, 1965, p. 143.

[44] Bailey, p. 67.

[45] *Ibid.*, p. 69.

[46] Marx, p. 5.

> tions and (b) systems of generalizations; (4) it predicts facts; and (5) it points to gaps in our knowledge.[47]

The goal function of theory is evident in Stinchcombe's statement that: "the reason for having theories of social phenomena is to explain the pattern in observations of the world." [48]

"The main task of any theory is to construct a calculus of relationships among classes of events such that the derived statements are (1) logically valid, (2) accurate in their claims regarding observable data, and (3) useful in describing, explaining, and controlling the course of the events with which they are concerned." [49] The virtues of theorizing for the researcher are clearly set forth by Zetterberg:

1) "a theory can be used to provide the most parsimonious summary of actual or anticipated research findings."
2) "a theory can be used to coordinate research so that many separate findings support each other, giving the highest plausibility to the theory per finding."
3) "a theory can be used to locate the most strategic or manageable propositions for testing."
4) "a theory provides a limited area in which to locate false propositions when an hypothesis fails to meet an empirical test." [50]

These four virtues of theorizing are more characteristic of axiomatic theories than of other types of theories, but all theories possess these virtues to some degree.

With respect to the development of a body of knowledge, a special advantage of deductive theories is implicit in point 2 above and made explicit below:

> Statements drawn from a deductive system are interdependent in a way that makes evidence which is relevant to the evaluation of one statement relevant also to the evaluation of others within the system. Because each postulate is logically connected with all the others, the discovery that one is defective casts doubt on the entire theoretical structure.
>
> Conversely, if evidence is found that supports one of the claims of the theory, it tends to give presumptive support to the entire structure. This is why deductive theories, when they can be established, contribute more to the development of knowledge than do isolated laws and generalizations based on the observation of disparate events.[51]

In view of the many advantages which accrue from theorizing it is difficult to decipher why discipline-oriented physical educators have been so ignorant of theory construction. I speculate that perhaps it is largely a function of being trained in a professional milieu rather than being educated in an environment of a discipline. In fairness, however, I must observe that only recently have curriculums in sociology begun to be as concerned with theory construction as with theory verification. Perhaps graduate curriculums in physical education will also begin to offer courses on the methodology of theory construction in addition to their spate of courses on the methodology of research design (etc.).

As I believe the matter of theory construction to be of vital importance in explaining agonetic behavior, and to be of crucial significance in the development of a body of knowledge related to the sociology of sport, I shall conclude this paper with a few tentative suggestions as to how discipline-oriented physical educators interested in the social phenomena of sport might begin to develop axiomatic accounts of agonetic behavior.

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[47] William J. Goode and Paul K. Hatt, *Methods in Social Research* (New York: McGraw Hill, 1952) p. 8.

[48] Arthur L. Stinchcombe, *Constructing Social Theories* (New York: Harcourt, Brace & World, 1968) p. 5.

[49] Schrag, p. 229.

[50] Zetterberg, pp. 161, 163, 164, and 166.

[51] Schrag, p. 229.

Constructing Social Theories

An obvious suggestion as to how discipline-oriented physical educators might proceed in their preliminary theoretical endeavors is that they should avail themselves of courses related disciplines concerning theory construction and study standard books on the subject. Most of the current texts dealing with theory construction[52] are written at a relatively elementary level and should pose no reading problem for graduate faculty or students in physical education.

A second suggestion, one which assumes some background and a degree of competency in sociological inquiry, is that sport sociologists within the ranks of physical education might well adapt general sociological theories to their own particular concerns. Sociologists make the distinction between *formal* theory and *substantive* theory. Glaser and Strauss contrast the two kinds of theory as follows:

> By substantive theory, we mean that developed for a substantive, or empirical, area of sociological inquiry, such as patient care, race relations, professional education, delinquency, or research organizatons. By formal theory, we mean that developed for a formal, or conceptual, area of sociological inquiry, such as stigma, deviant behavior, formal organization, socialization, status congruency, authority and power, reward systems, or social mobility.[53]

What I am suggesting is that sport sociologists in their exploratory theoretical efforts can profit by applying "formal theories" to their substantive concerns with sport. In short, I suggest that formal theories may be utilized as "models" for developing substantive theories.[54]

A third and final suggestion is that sport sociologists stress the development of theory rather than the verification of theory in their substantive studies of sport. The research strategies used in generating social theories are significantly different from the empirical tactics employed in the verification of social theories; especially as regards sampling procedures. However, I believe that the special strategies required for developing substantive theory can be readily mastered by sport sociologists.[55]

Summary

If physical education is to become an acceptable academic discipline, and the sociology of sport a viable scientific subdiscipline, then each must develop a body of knowledge consisting of a set of systematically interrelated concepts, propositions and theories. It is evident that these bodies of knowledge will not be obtained unless discipline-oriented physical educators turn their attention to model building and theory construction. Theory construction is a very arduous task, but a task which can be taken up in the spirit of play as well as that of work. As Homans has nicely put the matter:

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[52] See Borgatta and Bohrnstedt (1970), Coleman (1964), Gross (1959), Gross (1967), Stinchcombe (1968), Zetterberg (1965); Hubert M. Blalock, Jr., *Theory Construction* (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1969); and, Barney G. Glaser and Anselm L. Strauss, *The Discovery of Grounded Theory* (Chicago: Aldine, 1967).

[53] Glaser and Strauss, p. 32.

[54] For an excellent discussion of models as isomorphic theories see May Brodbeck, "Models, Meanings, and Theories," Chapter 12, pp. 373-403 in Gross (1959).

[55] A useful handbook for strategies for developing substantive theories is Glaser and Strauss (1967).

> If we like, we can look on theory as a game. The winner is the man who can deduce the largest variety of empirical findings from the smallest number of general propositions, with the help of a variety of given conditions. Not everyone need get into the game. A man can be an admirable scientist and stick to empirical discovery, but most scientists do find themselves playing it sooner or later. It is fascinating in itself, and it has a useful ulterior result. A science whose practitioners have been good at playing it has achieved a great economy of thought. No longer does it face just one damn finding after another. When Newtonian mechanics reached this sort of achievement it became the first thoroughly successful science, and other sciences have since become successful in the same way. But if theory is a game, it must like other games be played according to the rules, and the basic rules are that a player must state real propositions and make real deductions. Otherwise, no theory![illegible]

Melnick's Reaction to "The Nature of Sociological Theory and Its Import for the Explanation of Agônetic Behavior"

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I would like to congratulate Dr. Loy at the outset of my remarks for the excellent job that he has done in calling to our attention: (1) the types of work that are superficially taken as sociological theory but aren't; (2) for his accurate and well documented thoughts concerning the true nature of sociological theory; and (3) for his successful attempt at describing the uses and scientific significance of deductive theory. Unfortunately, I have had a difficult time this morning determining for myself whether Dr. Loy's call for an increased attention to model building and theory construction is particularly apt at this point in the development of the fledgling discipline, sociology of sport. A cursory glance at the evolution of this discipline reveals some interesting facts. The first book dealing with sport in a sociological sense to be reviewed by the *American Socio-*

[illegible] George C. Homans, *The Nature of Social Science.* (New York: Harcourt, Brace & World, 1967) p. 27.

logical Review was published in 1953, just 18 years ago.[1] The International Committee for Sociology of Sport was formed in 1964, only 7 years ago. Sociology of sport was not officially recognized as a discipline in the United States until 1966 when the Big Ten Body-of-Knowledge Project in Physical Education recognized "Sociology of Sport and Physical Education" as one of the six specific areas of specialization within physical education.[2] A relatively recent but important happening in the development of sociology of sport in the United States occurred in 1968 when the first symposium was held at the University of Wisconsin. The scarcity of published works dealing with the sociological analysis of sport further accentuates the discipline's relative immaturity. At present, we have no textbook and just two "readers" that have been published in the United States.[3] For those of us who consider ourselves discipline-minded physical educators interested in applying the sociological perspective to sport in order to better understand its nature and significance, our subscription to the *Research Quarterly* pays very few dividends in terms of inductive investigations which contribute to the body of knowledge of sociology of sport. Admittedly, I have not mentioned several excellent contributions to the literature of the discipline,[4] nevertheless, the point remains that the discipline is in its relative infancy with respect to its professional acceptance, literature, and research. Foshay has pointed out that the three criteria of an academic discipline include: (1) the presence of rules to serve as guidelines for the conduct of empirical investigations; (2) a unique domain that helps the discipline focus in on that portion of reality that it seeks to understand; and (3) a history which helps the discipline define its domain and rules.[5] With respect to the latter, Frederickson offers the following observation:

> Although the American people are currently participating in more than 250 sports, there is available in the literature historical accounts for something less than 50 of the lot . . .[6]

The point that I'm attempting to make is the following: Since sociology of sport is a relative neophyte in the family of academic disciplines, it seems a bit premature to me to follow a call for the development of deductive theoretical systems and model building as Dr. Loy's paper would have us do. The charges that Mark Lane makes in his book, *Rush to Judgment*, concerning the government's hasty attempt to find Lee Harvey Oswald guilty of assasination are somewhat analagous to the reaction that comes to mind after hearing this morning's presentation. Is it possible that we may be guilty of "rushing to an academic discipline" without having done the necesary spadework in the form of adequate amounts of inductive research? Whereas the gist of Dr. Loy's paper is contained in the belief that a body of knowledge cannot be obtained unless attention is turned to model building and theory construction, I prefer to take the view that the pursuit of a relatively new body of knowledge must be free of the "theoretical blinkers" that many investigators are forced to wear when they attempt to explain observable human phenomena with elaborate conceptual models. A more rational approach would have the investigator pursue concrete answers to practical problems posed by the specific subject matter under consideration. Schafer's reaction to a theoretical presentation at the 1968 sociology of sport symposium bears remembering. He observed that:

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[1] Frederick W. Cozens and Florence S. Stumpf, *Sports in American Life* (Chicago: The University of Chicago Press, 1953).

[2] Earle F. Zeigler and King J. McCristal, "A History of the Big Ten Body-of-Knowledge Project in Physical Education," *Quest*, Monograph IX, December, 1967, pp. 79-84.

[3] The two "readers" are *Sport, Culture, and Society* edited by John W. Loy, Jr. and Gerald S. Kenyon (New York: The Macmillan Company, 1969) and *Sport and American Society* edited by George H. Sage (Reading, Mass.: Addison-Wesley Publishing Company, 1970).

[4] The following works would make an excellent addition to the sport sociologist's library: *The Sociology of Sport—A Trend Report and Bibliography* edited by Gunther Luschen (The Hague: Mouton & Co., 1968); *Sport in Society* by P. C. McIntosh (London: C. A. Watts & Co. Ltd., 1963); *Sport—Mirror of American Life* by Robert H. Boyle (Boston: Little, Brown and Company, 1963); and *The Social Matrix of Physical Education* by Celeste Ulrich (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1968).

[5] Discussed in "The Criteria of a Discipline," by John E. Nixon, *Quest*, Monograph IX, December, 1967, pp. 42-48.

[6] Florence Stumpf Frederickson, "Sports and the Cultures of Man," in *Sport, Culture, and Society* edited by John W. Loy, Jr. and Gerald S. Kenyon (New York: The Macmillan Company, 1969), p. 91.

> Developing a conceptual system does not lead us to questions. We raise questions because of some concern we have, concern with a practical question, a practical problem or a concern about a gap in knowledge or a theoretical problem . . .[7]

Merton is of the opinion that systems of thought cannot be effectively developed before a great mass of basic observations has been accumulated.[8] Zetterberg has made a similar point when he observed that theoretical sociology is constructed out of research findings, insights and logic. In directing himself to the discipline of sociology, Zetterberg argues for a move away from taxonomy, functionalism and descriptive studies and a strong commitment to the development of propositional theory.[9] Zetterberg's urging of sociologists to follow this direction seems quite appropriate for sociologists, but is it an appropriate direction for a discipline that is organizationally only seven years old? I think not. Has sociology of sport paid the price in the way of field observations, descriptive studies and inductive research to warrant an excursion into the semantic labyrinths of propositional theory? Again, I think not. I might say at this juncture that I look upon sport as a rather unique human phenomenon requiring, in the main, its own unique conceptualizations and theorizing. While I certainly recognize the utility of some of the definitions and theories of sociology for explaining human behavior in the sport environment, e.g., Lenski's theory of social stratification seems appropriate for explaining in part, role differentiation in small sport groups,[10] I nevertheless am of the belief that it would be far more profitable for sport sociologists to concern themselves with the development of introductory courses in sport sociology on the educational front and to pursue concrete answers to practical questions indigenous to sport on the research front.

Sport sociologists need not feel defensive or inferior for their discipline's lack of theory. In comparing the disciplines of physics and sociology and the efforts made by sociologists to achieve the academic respect of the former, Merton has written the following:

> . . . between twentieth-century physics and twentieth-century sociology stand billions of man-hours of sustained, disciplined, and cumulative research.[11]

It is this road that sociology of sport will have to travel before it can arrive at the empirical generalizations and axiomatic theories that characterize a mature discipline. Zetterberg notes that Berelson and Steiner have compiled 1,045 numbered propositions (5 to 50 of them general enough to qualify as laws) from research on human behavior and yet, Zetterberg is of the opinion that "the dominant impression in looking at the sociology of today is one of theoretical paucity." [12] It would seem that here is a situation that truly calls for the application of theory construction and the placing of propositions into some type of theoretical order.

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[7] Walter Schafer, "Reaction to Kenyon Paper," in *Sociology of Sport* edited by Gerald S. Kenyon (Chicago: The Athletic Institute, 1969), p. 87.

[8] Robert K. Merton, *On Theoretical Sociology* (New York: The Free Press, 1967), p. 46.

[9] Hans L. Zetterberg, *On Theory and Verification in Sociology* (Totowa, N.J.: The Bedminster Press, 1965).

[10] Gerhard E. Lenski, *Power and Privilege* (New York: McGraw-Hill, Inc., 1966).

[11] Merton, p. 47.

[12] Zetterberg, p. 18.

The difficulty that sociology of sport faces in its pursuit of deductive theory was pointed out by Zetterberg when he observed that taxonomies and descriptive studies must precede theories and verificational studies.[13] If propositions confirmed by empirical research serve as the building blocks for theory, and if the purpose of a proposition is to show the relationship between two or more concepts, then surely a discipline is in for rough going that is still in the process of *defining* its key concepts.[14]

It is interesting to note that at the 1968 symposium on sociology of sport a theoretical paper was presented dealing with the concept of sport involvement and its usefulness for better understanding what people do and feel when involved with sport.[15] While the paper was well received and represented an important contribution to sport theorizing, there were some critical comments made however, that seem applicable to this morning's presentation. To summarize, it was the feeling of some that: (1) it makes more sense to proceed with empirical research before attempting to develop abstract conceptual systems; (2) we should test definitions over time to prove their validity before developing conceptual systems and definitional systems in the abstract; and (3) to develop conceptual systems in isolation from research takes us away from concrete phenomena and plunges us into semantic quagmires.[16] At the same symposium, Gregory Stone offered an interesting reaction to Gunther Luschen's attempt to use the Parsonian paradigm to explain the structure of sport groups and the problems they have to solve in order to be successful. Stone observed that "the history of science . . . is typically a graveyard of theory." [17]

In conclusion, I would like to suggest a viable alternative to model building and theory construction for sociology of sport. I would like to argue for carefully designed inductive studies that are "theory oriented," that is to say, studies that test clearly stated hypotheses. Merton offers the following suggestions for this type of research:

1) Hypotheses and, whenever possible, the theoretic grounds (assumptions and postulates) of these hypotheses should be explicitly set forth.
2) Attention should be called specifically to the introduction of interpretive variables other than those entailed in the original formulation of hypotheses.
3) *Post factum* interpretations should be so stated that the direction of further probative research becomes evident.
4) The conclusions of the research should include not only a statement of the findings with respect to the initial hypotheses but, when this is in point, an indication of the order of observations needed to test further implications of the investigation.[18]

If the sociology of sport is to "get on with business" and if that business be the development of a body of knowledge, then the inductive approach of specifying a concrete research problem and then seeking its solution by means of a carefully developed research design would seem to offer the greatest prospects for the discipline's immediate future.

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[13] *Ibid.*, p. 28.

[14] Gerald S. Kenyon, "Sport Involvement: A Conceptual Go and Some Consequences Thereof," in *Sociology of Sport* edited by Gerald S. Kenyon (Chicago: The Athletic Institute, 1969), pp. 77-84.

[15] No attempt was made in the professional literature of physical education to define sport until 1968 ("The Nature of Sport: A Definitional Effort," by John W. Loy, Jr., *Quest*, Monograph X, May, 1968, pp. 1-15).

[16] Discussion of Gerald S. Kenyon's paper, "Sport Involvement: A Conceptual Go and Some Consequences Thereof," in *Sociology of Sport* edited by Gerald S. Kenyon (Chicago: The Athletic Institute, 1969), pp. 69-76.

[17] Gregory Stone, in *Sociology of Sport* edited by Gerald S. Kenyon (Chicago: The Athletic Institute, 1969), p. 70.

[18] Merton, p. 154.

Hellison's Reaction to "The Nature of Sociological Theory and Its Import for the Explanation of Agonetic Behavior"

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My general reaction to John's paper is that it is a well-documented, scholarly effort which moves smoothly and logically from its premises — e.g., physical education is a discipline — to its conclusions — e.g., theory construction is essential to the development of a body of knowledge.

A large segment of the paper is devoted to defining what theory is and is not in order to clear up the confusion that apparently exists, at least to some extent, at three levels: among sociologists (to a lesser extent), among discipline-oriented physical educators (many of whom, the paper suggests, have been "trained in a professional" setting), and among professional physical educators ("likely due to the essential shallowness of their subject matter", according to the paper).

I would like to focus my reaction on the connections among these three levels in relation to the usefulness of theory, partly because I am biased toward making theory and research relevant for physical education practice, partly because I wonder how many professional physical educators who misuse the term theory will ever read this paper, and partly because the paper itself refers to these three levels without spelling out their interrelations.

In one of Kenyon's several papers on the sociology of sport as a subdiscipline,[1] he distinguishes between a discipline and a profession in terms of objectives — a discipline seeks to describe and explain some portion of reality while a profession seeks to improve the human condition — and motivations — curiosity for a discipline versus service for a profession. He does not, in my opinion, deal in enough detail with the articulation between these two groups. Luschen's opening remarks at a 1968 sociology of sport symposium,[2] envisioned sport sociology as a part of sociology until results are obtained which can be applied to physical education theory and then to sport and exercise practice. Again, how this procedure is to take place is not considered.

Most of us apparently assume that theory will somehow dribble down from one level to another. Yet John's paper suggests that theory — its definition, construction, and use — has not permeated the thinking of either the discipline-oriented physical educators or the professional physical educators. His paper leaves the crucial question of how this is to occur in the air, and I finished his summary with the feeling that body of knowledge or not, theory development or not, the three levels would continue to operate reasonably independent of one another, particularly those ninety or so per cent of us who are professional physical educators.

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[1] Gerald S. Kenyon, "Some Perspectives of the Social Science of Sport and Physical Activity," Paper read at University of Iowa, Iowa City, July 20, 1966. (mimeographed)

[2] Gunther Luschen, "Some Recent Developments in the Sociology of Sport," in *Aspects of Contemporary Sport Sociology*. Edited by Gerald S. Kenyon. (Chicago: Athletic Institute, 1969).

Locke's critique of research in physical education,[3] which is pertinent not only because he addresses theory directly in this monograph but also because research is or should be directly tied to theory (since theory should be "empirically testable"), treats the question of relevance at some length. He argues that theory and research have not been very helpful to the practice of physical education so far, that some theorizing (more correctly, conceptualizing) has been in his words "a waste of time." It is his view that theory is only useful when there are people to use it; therefore a direct effort must be made to create a research enterprise and environment that keeps everyone close to the real problem: the conduct of physical education. The current approach of several levels operating independently, which he calls "parallel play behavior" (interestingly, in view of John's reference to Homans at the end of the paper), just doesn't work.

We cannot, in my opinion, treat theory construction as a game to be played by a group of sport sociologists who don't pay much attention to the profession of physical education. Abraham Maslow, in his preface to the second edition of *Motivation and Personality*,[4] rejected the notion of a value-free science, which he argues is a "futile effort", in favor of a "value-instigated search by value-seeking scientists." He continues: "I believe it can be shown that normative zeal (to do good, to help mankind, to better the world) is quite compatible with scientific objectivity . . ." Maslow may be providing us with at least one strand of a potential bond between the discipline and the profession.

In summary, I am quite pleased with John's effort to define theory; in fact it has been helpful in my work. But I think that his premise of physical education as a value-free discipline and his conclusions which stress the development of a body of knowledge via the theory construction route are too exclusive, especially in view of the side roads he takes along the way. At least this approach does not seem very fruitful to me if we really intend to use theory in the practice of physical education. Instead, I favor a close alliance of discipline and profession, an alliance which will provide value-oriented objectives for the discipline and useful theory for the profession.

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[3] L. F. Locke, *Research in Physical Education* (New York: Teachers College Press, 1969).

[4] Abraham H. Maslow, *Motivation and Personality*. 2nd ed.; (New York: Harper and Row, 1970).

Motor Memory Retrieval – A Theory and Mathematical Model

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INTRODUCTION

In keeping with the general purpose of this section of the research meetings, the content of my paper emphasizes the construction *per se* of a deductive theoretical system, with only a superficial treatment of the content subject matter. An in depth discussion of the cognitive processes of memory storage and retrieval is not directly relevant in a sociological meeting, nor is it possible to present the complete theory in the time and/or space allotted in these circumstances. The purpose of this presentation then, is to discuss the need for theoretical formulation and the role of representing theory in mathematical symbols, to present a few examples of deductively formulated theorems, and to describe subsequent attempts to empirically verify them.

The subject matter of this theory is motor memory—memory not as a capacity variable as it is often construed, but rather as an "information processing" system which regulates the temporal aspects of memory organization, storage, and retrieval. Investigation into motor memory in this context can be achieved by working with choice reaction time (CRT) tasks in which the amount and type of information presented to a subject are kept as constant as possible while varying the nature of the motor response. Subsequent examination of the response latencies enables an investigator to test hypotheses on the nature of the storage and retrieval of simple motor tasks.

Need for a Theoretical Framework

It is readily apparent, on reviewing the literature on response latencies, that there are a number of conflicting findings in CRT experiments despite apparent similarity among experimental conditions. However it is not apparent why these conflicting findings have arisen, and, depending on the manner in which such discrepancies are explained, these differences may or may not aid in the advancement of knowledge. On the supposition that these differences can be explained on the basis of some theoretical rationale, then knowledge is gained and science advanced. If, on the other hand, one cannot produce any logical reason for seemingly conflicting findings, other than slight variations in experimental procedures, then no knowledge is gained, only questionable empirical evidence added to the already abundant quantity in existence. Obviously what is needed is a theory to which the findings may be fitted. Provided that a large proportion of the experimental findings can be explained within this theoretical framework, then the explanation gains credibility as a satisfactory theory. If some findings are contrary to theoretical prediction then either the theory must be modified, or the experimental procedures producing these findings must be seriously questioned. Not only will a theory explain (or fail to explain) a number of empirical findings but it will also suggest new theorems and laws, which then lead to further experimentation and verification, producing new ideas, new questions, and consequently expand the theory even further. Thus science advances.

Some investigators are strict empiricists, reporting experimental procedures and findings, but not attempting to relate the results to any established or hypothesized theory. Unfortunately a number of the conflicting findings reported in CRT studies seem to have been conducted by such investigators. In many instances the experimental procedures, design, etc., are basically sound and the results probably valid and reliable. However, these investigators explain the reasons for the discrepancies between their findings and those reported elsewhere in terms of experimental procedures alone, rather than in terms of the interrelationship between theory and empiricism. Experimental differences in procedures *can* be used as adequate explanations for discrepant *empirical findings*, but the aim of behavioristic research must go beyond this and explain the *nature of the change within the human organism* brought about by these experimental differences. It may be true that it was, say the length of the inter-stimulus interval (ISI) which caused a longer CRT in one study than the other—but this is a very shallow explanation. It is not (hopefully) ISI which is being studied, but rather the organization processes within the human. Thus, although different ISIs may be the experimental reason for different findings, what is basically important is what sort of processes within the organism account for different empirical findings. It is acknowledged that these inner mechanisms can usually only be inferred from the basis of overt responses, but inferences must be made nevertheless. Without them explanation and theory are very superficial.

Justification for a Mathematical Model Approach

A question often raised, and certainly with justification, by the researcher unfamiliar with mathematical models is, "Why use symbolic models, why not try to find out what is really happening within the system rather than trying to explain overt behavior in terms of some meaningless mathematical equation?" It is true, if the mathematical function which has been fitted to the data is indeed meaningless in terms of theoretical concepts, the mere fact that it is representative of the data is of little value. However, if the mathematical model is developed as a quantitative representation of some theory, with meaningful parameters in the function, then experimental findings which agree closely with the theoretical predictions of the mathematical model give evidence that the underlying theory is sound. If the experimental results do not agree with the model then further research is required to ascertain whether the model was not an accurate quantitative representation of the theory, or whether the theory is faulty and needs revision.

In the past fifteen years, and especially in the last five, the application of mathematical methods has become an increasingly important research tool in many areas of study. No longer restricted to the statistical analysis of data, mathematical methods are now frequently used in theory construction and evaluation, especially in the fields of psychology and sociology. The usual statistical procedures in research into such areas as learning or attitude change, areas where repeated observations are gathered over a period of time on the same indviduals, have been based on the familiar probability models which assume independence of observations. It is obvious that such measures are not independent, indeed it is basic to the concept of learning that successive measurements are not independent, and the use of these standard probability models will produce uninterpretable results. It is partly for this reason that the use of mathematical models based on dependent probabilities (such as Markov chains) have become prominent in research methodology today.

It is acknowledged that in many cases the mathematical models used in the behavioral sciences have been restricted to relatively simple theoretical models and explanations. Even with the aid of high speed computers, models involving more than a few variables and parameters become exceedingly complex and difficult to work with. Despite these limitations they have proved useful in developing, verifying and rejecting numerous theories in psychology, sociology, and economics. Until a better method is found for explaining various aspects of behavior, such mathematical methods will continue to be used and to add understanding to some of the many confusing areas of scientific investigation.

The Theory

A formal theory of motor response organization and retrieval has been developed. This consists of definitions, a set of empirical findings, a set of assumptions based on these findings and explaining the causality relationships between them, and a set of testable theorems logically deduced from the assumptions. To fulfill the stated purposes of this presentation, only a few definitions, assumptions, and theorems are stated.

Definitions

Response program (RP)—an unobservable compilation of neural messages governing a motor task. It is assumed to be analogous to a computer program and composed of a number of subprograms.

Response complexity (RC)—a subjective measure of the number of subprograms used to compile a response program. It is assumed that the greater the number of changes of direction of movement and/or the greater the number of muscles involved in the response, the more complex is the response.

Selective attention (SA)—a limited capacity memory store capable of containing only one engram at a time. Decay occurs very rapidly in the absence of reinforcement.

Primary memory (PM)—a temporary storage area, limited in capacity to approximately seven to ten engrams. Decay occurs without reinforcement but not nearly as fast as it does in SA.

Secondary memory (SM)—a permanent memory store of unlimited capacity. Engrams, through reinforcement, can be placed in SM and once there cannot decay.

Assumptions and Theorems

Assumption 1: A motor task is learned by combining, in a certain order, a number of smaller parts or components of the total task. These components are called subprograms and are assumed to have been previously learned. The combination of the relevant subprograms forms a response program which can exist as a unit itself.

Assumption 2: when a response is called for by presentation of a certain stimulus, the following progression of events takes place:

1) The stimulus is perceived.
2) The stimulus is categorized as being one of a number of possible stimuli.
3) The name (or number, or code) of the required response to the perceived stimulus is determined.
4) The RP for the execution of the required response is searched for, found, and discharged from a memory storage area to the motor effector system.
5) The neural pathways carry out the instructions released by the RP and elicit the required motor response.

Each of these five steps in information processing and retrieval takes some non-zero time t_i, $i = 1,2,...,5$, with t_i independent of t_j for all i, j, and the total processing and retrieval time (CRT) being the sum of the t_i.

Assumption 3: The greater the complexity of a task the more sub-programs required to make up the total RP.

Theorem 1: RTs, simple and complex, for response B are greater than for response A when response B is of greater RC than response A.

Assumption 4: When a certain response is required to be displayed, the retrieval process looks for this stored RP in SA first, then if not in SA, it searches in PM, and finally, if not found there, in SM. This search process is performed serially, not simultaneously, in all three storage areas.

Assumption 5: A RP for response A will be in SA with probability P_A, where P_A is a function of the sequential effects of the response. In a two choice CRT task where the probability of a-A is π and of b-B is $1-\pi$, the RP for A will exhibit the following transition probabilities:

		State of RP_A on trial n+1	
		SA	**PM**
State of RP_A on trial n	**SA**	$\pi c_A + (1-\pi)c'_B$	$\pi(1-c_A) + (1-\pi)(1-c'_B)$
	PM	$\pi(1-c'_A) + (1-\pi)(1-c_B)$	$\pi c'_A + (1-\pi)c_B$

where: c_i is the probability of RP i staying in SA for trial n+1
if i was called for on trial n
c'_i — the probability of RP i staying in PM for trial n+1
if i was called for on trial n.

Theorem 2: The distribution of CRTs for a response with an associated probability of occurrence of π is a composite distribution of times taken from two gamma distributions $F_1(t)$ and $F_2(t)$, where the probability density function of $F_1(t)$ is:

$$f_1(t) = \frac{1}{\Gamma(\alpha)\beta^{\alpha}} t^{\alpha-1} e^{-t/\beta}$$

The derivation and final form of the composit distribution function, under the conditions of assumption 5, is given in Appendix A.

Preliminary Test of the Theory

A proposed theory must not only predict new relationships and explanations, but also must be able to account for the available empirical evidence. A few examples follow, demonstrating how the proposed theory can explain some basic empirical findings.

Empirical finding: The increase in CRT with an increase in the number of S-R pairs is independent of a change in the probability of any stimulus or response.[1, 7]

Theoretical explanation: If the stimulus categorization stage is an exhaustive serial scanning search in which the perceived stimulus is compared with the internal representation of each of the possible stimuli, then obviously the greater the number of stimuli, the longer the scanning process. As the probability of a RP being in SA is strictly a function of the probability of a response, the response search and release stage will not be affected by an increase in the number of S-R pairs providing the probability of a response remains constant. It is possible that with any increase in the number of S-R pairs there is a decrease in the average strength of the S-R bond, that is, the responses are not as well learned as if there were fewer pairs. Thus the response selection stage may take longer with an increase in the number of S-R pairs.

Empirical finding: CRTs are longer for repeated S-R pairs than for changed S-R pairs in a discrete CRT task.[5, 6, 10, 11]

Theoretical explanation: In a discrete CRT task the subject has sufficient time between trials to prepare himself for the next S-R pair. Although the probability of occurrence of any stimulus is independent of the previous one, it is theorized that the subjective probabilities formulated by the subject do not exhibit this independence. If response A is required on trial n the subject assumes that the probability of B being required on trial n+1 is higher than it would be if B had been required on n. Therefore, given equal average probabilities of response requirements, a subject will, on the average, be more likely to put into SA that RP not retrieved on the previous trial. This relationship is stated in the theory by the transition matrix in which $c_A < c'_A$ and $c_B < c'_B$.

Empirical evidence: Incorrect responses have, on the average, shorter CRTs than correct responses.[4]

Theoretical explanation: An incorrect response is probably the result of releasing the RP program in SA without first making a thorough enough check to see if it is the response required. Consequently incorrect responses, almost always being released from SA, have a shorter average search time than do correct responses, which may be found in PM or SM as well as in SA.

Testing Procedures

The twelve subjects were volunteers, male and female, ranging in age from 19 to 33 years, and enrolled as students at the University of Wisconsin, Madison. Each subject completed 120 trials on each of six experimental conditions. The experimental design for arranging the order of testing was a 6 x 6 Latin square with one replication.

The experimental task required the subject to react to one of four coloured stimulus lights by releasing his hand from a start button and quickly making the appropriate A or B response. Figure I indicates the arrangement of the apparatus.

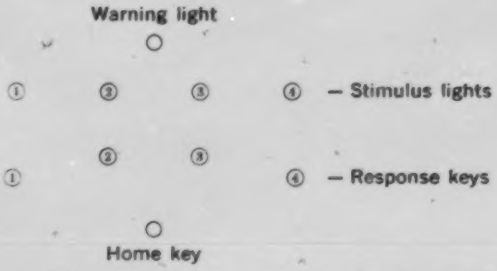

Figure I. Design of Response Keys and Stimulus Lights for Simple and Choice Reaction Time Tasks.

Task A required the subject to hit key 1 in response to stimulus light 1. Task B required the subject to hit keys 4-2-3-2 in rapid succession in response to stimulus light 4. In the simple RT task only light 1 was presented and the subject was aware of this certainty. In the specific CRT task dealt with in this paper, lights 1 and 4 were presented equally often, but randomly (within the constraint of equal frequency), over the 120 trials. For half the subjects stimulus lights 1 and 4 were associated with tasks A and B respectively, and lights 4 and 1 with A and B respectively for the remaining six subjects.

The intertrial interval was approximately 12 seconds, a two minute rest followed trials 30 and 90, and a five minute rest was taken after trial 60.

Results and Discussion

Theorem I. The empirical findings were as follows:

Table 1. Simple and Choice RTs for Tasks A and B.

	TASK	
	A	B
Simple RT	158 msec.	177 msec.
Choice RT	245 msec.	243 msec.

These findings suggest that theorem 1 is valid only in part, and that response complexity, as defined in this study, has a negligible effect on response latency in a CRT task. It had been hypothesized that the RT would be greater for the B task due to a longer read out time (t_4, step 4 in assumption 2) for the more complex response program. However the theory also predicted the relationship $C_B > C_A$ in the transition matrix of assumption 5, that is, that the RP for task B has a higher probability of being placed in SA than does the RP for A. Under this condition then, the findings could be accounted for by the theory — the longer read out time for the more complex task is compensated for in a CRT situation by a shorter average search time. Unfortunately further investigation into this possible explanation has shown that the reduced difference between RT for A and RT for B from the simple to the choice task can only be partially accounted for by this argument. Thus the theory is incomplete in this respect.

Theorem 2. The data were fitted to a distribution of the form given in theorem 2 by the use of program Gamma-2.[1] The theoretical distribution of CRTs as predicted by the model for task A, along with the empirical distribution, is given in Table 2.

Table 2. Observed and Predicted Frequency Distributions for CRTs to Task A.

RT	Observed	Predicted
.12*	6	7.84
.14	22	20.43
.16	44	44.18
.18	85	73.61
.20	87	95.15
.22	86	101.78
.24	97	95.02
.26	84	80.24
.28	62	62.81
.30	63	46.33
.32	34	32.59
.34	22	22.06
.36	12	14.45
.38	5	9.22
.40	5	5.75
.46	6	6.86

* Each value is the upper bound for its interval

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[1] A program for fitting a combination of gamma distributions (MIX3GAM) was developed by Melvin Moy, University of Wisconsin, Madison, for use on the UNIVAC 1108. This program utilizes subroutine STEPIT, copyright 1965, J. P. Chandler, Indiana University. Program GAMMA-2 is a conversion and slight adaptation of MIX3GAM, done by R. Schutz for use on the IBM 360 at the University of British Columbia, Vancouver.

A goodness-of-fit test between observed and predicted values yielded a chi-square value of 14.92. For nine degrees of freedom (16 intervals minus 7 estimated parameters) the probability associated with this test is approximately .10, thus suggesting that the data do not differ significantly from the values predicted by the model.

From the parameters α and β yielded by GAMMA-2 the mean CRT for task A was calculated to be 241 msec., which is very close to the obtained mean of 245 msec. (the predicted and obtained means for B were 238 and 243 respectively). Further calculations, based on the parameters fitting a mixture of two gamma distributions to the observed CRTs, showed that the means of these two distributions are 252 msec. and 210 msec. That is, each reaction time is drawn from one of two possible distributions, one in which the search process has to examine both SA and PM ($\bar{X} = 252$ msec.), and the other in which the required RP is found immediately in SA ($\bar{X} = 210$ msec.). The estimates of p_1 and p_2 generated by GAMMA-2 for response A were .26 and .74 respectively. So far then, the results obtained fit beautifully with theorem 2 — the observed distribution of CRTs can be well fitted by a gamma distribution which is which is the weighted sum of two gammas. These two distributions represent CRTs to RPs drawn from SA and PM, the longer latencies being associated with those implying that the RP for B would be in SA 74% of the time, just as predicted (although a difference of a somewhat smaller magnitude was expected). However — such good fortune is highly unlikely in the initial stages of theory construction, and further analyses showed a serious flaw in this premature acceptance of theorem 2. The derived parameters for the CRTs associated with response B, although supportive in most respects, showed that the probability of the RP for B being in SA was only .22, not 1.0 — .26, i.e., .74 as expected. The probability of the RPs being in SA do not sum to 1.0! Therefore, if one still considers tenable the assumption of total CRT being a mixture of two gamma distributions representing retrieval of RPs from SA or from PM, then it must be concluded that SA does not contain a RP on each trial. It may be hypothesized that a subject will sometimes (on about half the trials, according to these results) place a RP in SA, that is he will anticipate the response. The other half of the time however he feels that it is better not to risk guessing, and leaves SA "blank" so that the search mechanism may go immediately to PM.

An Appraisal

The question now must be asked, and answered, "Has the construction and testing of this deductive theory contributed to our knowledge about the cognitive processes involved in eliciting a motor response? Or has it merely been an academic exercise in logic?" Answering the latter question first; it has indeed been an enjoyable and rewarding academic exercise. In regards to the former question; it is the opinion (unavoidably biased as it may be) of this investigator that the development of this theory and subsequent testing of the ten theorems incorporated into it, will prove to be of some benefit in furthering our understanding of motor memory retrieval. The theory has flaws, but they can be detected, adjustments made, the theory revised, new predictions made and tested, facts discovered, laws formulated, and, hopefully, a useful, verified theory established.

Appendix A: Theoretical CRT Distribution

Let $F(t, \pi)$ be the distribution of CRTs for a response with an associated probability of occurrence of π.

then $F(t, \pi) = qF_1(t) + \gamma F_2(t)$ (1)

where: $F_1(t)$ and $F_2(t)$ are the distributions (gamma) for a RP in SA and PM respectively. q and γ are the asymptotic probabilities of a RP being in SA and PM respectively.

Determination of q, γ:

$$q = \lim_{n\to\infty} P_{SA,n}$$

(2) where: $P_{SA,n}$ is the probability of a specific RP being in SA on trial n (and henceforth designated by Pn).

now $P_{SA,n+1} = p_{21} (1-Pn) + p_{11} Pn$ (3)

where p_{21} and p_{11} are the transition probabilities of the matrix on page 114. Solving for Pn in the difference equation (3), and substituting into equation (2) yields:

$$q = \lim_{n\to\infty} \left(\frac{p_{21}}{p_{21} + p_{12}} - \left[\frac{p_{21}}{p_{21} + p_{12}} - P_1 \right] (p_{22} - p_{12})n\text{-}1 \right)$$

$$= \frac{p_{21}}{p_{21} + p_{12}} \quad (4) \qquad \text{because} \lim_{n\to\infty} (p_{22} - p_{12})^{n-1} = 0$$

Solving for γ in a similar manner, replacing the values of equation (4) with those of the model on page 114, and then substituting into (1) gives:

$$F(t, \pi) = \frac{[1 - \pi c'_A - (1 - \pi) c_B] F_1(t) + [1 - \pi c_A - (1 - \pi) c'_B] F_2(t)}{2 - \pi (c_A + c'_A) - (1 - \pi) (c_B + c'_B)}$$

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Ryan's Reaction to "Motor Memory Retrieval - A Theory and Mathematical Model"

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My first act after accepting the assignment of reacting to Dr. Schutz's paper was to write him for immediate help. I informed him that I knew very little about mathematics, even less about motor memory, and absolutely nothing about mathematical models. His immediate reaction was "good." It should be obvious to everyone, therefore, that I am the ideal person to react to his paper.

After reading his presentations, and browsing through a few sources on mathematical models I do feel that I may be able to make some small contribution in spite of—or perhaps because of—my lack of credentials in this area.

Rather than discussing Schutz's "motor memory retrieval theory" per se, I would like to discuss mathematical models in general, particularly as they pertain to the social sciences in an attempt to reemphasize points that Schutz has already made. As Dr. Schutz has pointed out in his paper, our primary concern in this session is the methodology involved. It appears to me that his presentation serves as a good example of how math models can be applied to areas that are of interest to the physical educator.

I suspect I am like about 99 percent of our colleagues who don't know what the person who constructs mathematical models is doing, doesn't care, and probably wouldn't understand even if the model builder tried to explain. I felt, therefore, that although Schutz has spent some time on the topic that it would be useful to examine further the reasons for building mathematical models, including both the strengths and weaknesses of this approach. If we were to ask certain individuals who are presently working in the area just why they chose to do so I suspect a few would reply they simply enjoyed doing it, and if we didn't like it we could go to hell. While this reason might be quite adequate for some purposes, I am certain that Schutz wouldn't want the matter left at that point.

It seemed helpful in clarifying my own thinking regarding the usefulness of mathematical models to first review the basic steps in the scientific process. In general the scientist strives to accomplish three major objectives: (a) to construct a theory that is consistent, (b) to arrive at deductions that are logical, and (c) to describe observations that are reproducible. These three objectives correspond very closely to what Kemeny and Snell[1] describe as the three steps in the basic cycle of scientific method—induction, deduction, and verification. The attainment of all three objectives, I might add, seem to be enhanced by the use of mathematical models.

Induction is the step which carries the scientist from factual observation to the formation of theories. For the builder of math models this is the stage that takes masses of raw data and organizes them into a system of formal equations that hopefully will not only explain the existing data, but will permit inferences regarding future data. In its most productive form a few mathematical concepts permit much vague, apparently unrelated, information to be intellectually manageable.

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[1] J. G. Kemeny, and J. L. Snell, *Mathematical Models in the Social Sciences*, (Ginn and Co., Palo Alto, 1962).

Some theorists have argued that in spite of the masses of data in the social sciences there is still too little known about social behavior to warrant sophisticated models of behavior, and that premature theorizing at this time would tend to stifle growth rather than promote it. On the other hand, procrastination may simply make the situation more complex. As Schutz has pointed out, more and more data is being collected that may be completely useless for theoretical purposes or the actual advancement of knowledge.

In constructing theories or mathematics models the scientist typically has an idea of what the topic he is investigating is "really" like, i.e., he has an informal theory. Most mathematical models of social behavior are interpretations of verbal theories. The psychologist and sociologist seem, at least at this stage of the game, to be wary of purely mathematical theory. If the model maker is to base his theory on an existing verbalization he must translate, as it were, the informal theory to a formal set of basic postulates. Predictions from the math model, therefore, are really predictions from the basic postulates, and the latter are mathematical translations of the postulates that were implicit in the underlying informal theory.

It has been suggested that human behavior is too complex to be represented mathematically. While this may be true in some cases it seriously underestimates the high level of abstraction necessary in the construction of mathematical models, even in the physical sciences. One never tries to represent the objects of study literally, only very limited aspects of them. The difficulty, of course, is in the selection of the most essential aspects. Newton, for example, would not have gone far with a gravitational law that depended on color rather than the mass of the body. It is this inductive stage of model building that is perhaps the most creative aspect of the scientific process. It should be noted that translating the basic postulates of the informal theory into mathematical form is far from a mechanical process. During the inductive stage the scientist is forced to classify "fuzzy" and ambiguous statements and "sharpen" the original informally stated postulates.

The second step of the scientific process is the *deductive* stage. Once a theory is formalized precisely, the tools of mathematics and logic are available to deduce consequences from it. The use of a common mathematical language by various experimenters, even from different disciplines or theoretical backgrounds should serve to clarify or eliminate controversies that are due to differences in terminology or to ambiguities in the verbal theories. Further, as noted earlier, postulates from a verbal theory may be rather ambiguous, but if the theory can be restated in mathematical form, the desired statements can be derived by rigorous mathematics if it is implied by the theory.

The third step in the scientific process is *verification*. For a scientific theory to be worthwhile it must be capable of being tested. Many of the older psychological theories persisted much longer than they should have simply because their testable consequences were vague and equivocal. Once the data were collected it was possible to make a variety of interpretations depending on the theoretical position. Thus in many cases theories were so nebulous as to make proof of their falsity impossible. The establishment of a mathematical model, by permitting unequivocal predictions, increased the probability that if the basic postulates were false they might be refuted by the evidence. Another way in which mathematical models enhance the scientific enterprise is when a prediction fails to be supported by experimentation it is much easier to locate the source of trouble if the postulates and assumptions are mathematically stated. In other words, math models inherently have a self correcting mechanism that is essential to scientific progress.

According to Rosenberg[3] there seem to be three disadvantages in the use of mathematical models. Two of these we have referred to already; the premature formulation of theory before enough is known about the area and the disadvantage that an elegant mathematical model may suggest that we actually know more about a topic than we actually do, and thus discourage a program of empirical research. The third criticism is that initial formulation of verbal theory often results in a highly simplified and idealized model. This could mean that experiments and observations are directed towards aspects of the problem that are easy to interpret and measure, but that are of little practical significance.

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[3] S. Rosenberg, "Mathematical Models of Social Behavior." In Lindzey, G. and Aronson, E. (ed.) *The Handbook of Social Psychology*, (Vol. 1. Addison-Wesley Co., Menlo Park, Calif., 1968).

As I mentioned earlier, Schutz's paper is a good example of the chain of scientific thought. First he has attempted to organize a substantial amount of existing data into a relatively concise formulation that permits testing of rather specific hypotheses. It isn't clear to me at this point whether all of his terms are as clearly linked to operational definitions as they might be. If not, interpretation of his data may still be rather ambiguous. On the other hand, it is clear that the theory should produce deductions that are testable—thus resulting in a theory that is self correcting.

The value of mathematic models need not be restricted to prediction in scientific situations. I would be rather surprised and happy if a math model ever predicted anything correctly, but I wouldn't be disturbed if it didn't. Schutz's model has already yielded some confirming data, but more importantly, it has also generated new hypotheses and suggested ways that the theory must be revised.

Since mathematical models of social behavior have a short history and are currently undergoing rapid changes, judgments regarding the usefulness of mathematical theory in the social sciences are premature. It is clear, however, that such models have the potential for organizing data, pointing out deficiency in both the data and the theory, and leading to new areas of research.

Dr. Schutz is to be commended for his initial efforts in the area, and encouraged to continue his research. It is hoped that when he presents his second paper in this area more of us will be more completely informed.

Riots on the Rails–An Axiomatic Approach to Collective Behavior

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Howard Nixon
University of Massachusetts

Although not conceived for the purpose, this paper is a logical continuation of Dr. John Loy's contribution of yesterday. It is an attempt to utilize social psychological theory to explain one aspect of soccer fan behavior — this aspect is the destruction of public property. Before embarking upon a discussion of the main body of the paper, let us first define "collective behavior": "Crowds, mass behavior, the behavior of publics, social movements — these rather than the more stable and predictable phases of group life, are the subject matter of collective behavior." [1] Collective behavior is characterized by spontaneity and is not due to pre-established understandings or traditions.[2] This can be contrasted with organizational behavior which is governed by established rules of procedure. From these exemplary statements, it can be observed that the soccer crowd can be categorized as a collectivity. In her article on Brazilian Soccer, Janet Lever describes how excitement can lead to mass rioting among soccer fans.[3] She talks about the religious fervor which soccer stimulates and how this fervor produces, spontaneously, the communal grief of a city when its team loses. This article is a rarity. One has only to scan the indices of various books concerned with the topic of collective behavior to realize that the sport audience constitutes an area of neglect. Hollingworth's book on *The Psychology of the Audience* is a prime example.[4] It contains only passing acknowledgements to the existence of the sport fan. Turner and Killian suggest that the crowd behavior of the audience is conventionalized and that the participant is present in an atmosphere of permissiveness and sanction among "normal" people which is the minimum condition for such an extravagant expression.[5] It is probably because the sport audience can be classified (a) as individualistic and expressive[6] and, therefore, does not usually effect any change in the external situation; and (b) as conventionalized[7] and, therefore, in "seeing one you have seen them all" that it has been neglected as an area of research. For these two reasons the audience cannot be classified as deviant and lacks appeal.

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[1] Ralph H. Turner and Lewis M. Killian, *Collective Behavior* (Englewood Cliffs, N.J.: Prentice-Hall, 1957) pp. 3-4.

In the last decades, however, it has been obvious that audience behavior is becoming a source of concern. The major reason for this is that the behavior of the audience is no longer conventionalized along the guidelines of social acceptability. An audience which generally could be classified as individualistic and expressive has become more and more differentiated in its participation. There has appeared a sizeable sector in every audience whose behavior is classifiable as individualistic, focused and active.[8] Such concern about audience behavior is evident in the following passages:

> Five minutes before the end of play, supporters of the losing team rushed onto the field and broke up the game, mobbing not only the officials, but players of the opposing team. This action touched off a general riot which the local police were powerless to curb.[9]
>
> Violence in and around soccer is sweeping England, usually considered a citadel of fair play and orderly behavior. Rough stuff on the playing field is matched by fighting in the grandstands,

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[2] Herbert Blumer, "Collective Behavior" in A. M. Lee (ed.) *Principles of Sociology* (New York: Barnes and Noble, 1951)

[3] Janet Lever, "Soccer: Opium of the Brazilian People" *Trans Action* Vol. 7, Number 2 (December, 1969), pp. 36-43.

[4] Harry L. Hollingworth, *The Psychology of the Audience* (New York: American Book Company, 1935).

[5] Ralph H. Turner and Lewis M. Killian *op. cit.* pp. 143-161.

[6] *Ibid.* pp. 84-88. Crowd behavior is individualistic if crowd members act together but not in an integrated way. The actions of individuals are parallel and similar without being cooperative. Crowd behavior is expressive when the objective of the crowd is to heighten the mood of feelings of the individuals comprising it, i.e., the audience at a funeral of a popular figure.

[7] *Ibid.* p. 157. Crowd behavior is conventionalized when the spontaneous and uninhibited behavior becomes patterned, i.e., throwing cushions in the ring at bullfights.

[8] *Ibid.* pp. 84-88. An individualistic crowd has already been defined. Crowd behavior is focused if the objective of action is specific, i.e., a particular victim of the destruction or a particular building such as the Bastille. Crowd behavior is active when the criterion of attainment is some action upon an object or person external to the crowd, i.e., throwing rotten apples at a performer.

[9] Sidney W. Rice. "Sport Fans are a Menace." *Journal of Health, Physical Education, and Recreation* (May, 1952) p. 14.

> fierce attacks on special trains and out-breaks in nearby streets. . . .[10]
>
> Fifty policemen with dogs boarded a Soccer special yesterday after scores of football/soccer fans went on a rampage of destruction.
>
> The train, packed with Manchester United supporters, made an emergency stop between Knott Mill and Oxford Road stations, Manchester, after leaving Old Trafford (Manchester United's ground).
>
> Windows had been smashed, seats ripped, luggage racks torn down, and wall panelling kicked in.[11]

It is this type of report which provided the germinal idea for the present paper. I previously stated that the problems of crowd deviance were incurred when the crowd shifted from being individualistic and expressive to being individualistic, focused, and active. The purpose of this paper is to predict certain conditions which lead to this shift in behavior.

Theoretical Rationale

The theorems, operationalized in this paper, were deduced from the axiomatic base of the frustration-aggression experiments of Dollard and his Yale colleagues[12] and the imitation of aggression experiments of Bandura, Ross, and Ross.[13] What is an axiomatic base and what is a theorem? "A deductive theory must contain both axioms and theorems. Axioms are propositions that are assumed to be true. Theorems on the other hand are derived by reasoning, or deduced from the axioms."[14]

Axiomatic deduction can be accomplished in two ways: the first is by reducing definitionally the number of concepts involved in the theoretical matrix; the second is accomplished through a reduction in the list of propositions either by a combination of propositions and definitions or a combination of propositions with propositions.[15] These methods of reduction and combinations are applied to Dollard's and Bandura's theorems in order to extricate the axioms from the theoretical matrix.

Dollard and his colleagues construct a series of inter-related propositions (a theory) from the work of McDougall[16] and Freud.[17] These propositions are presented in a concise form by Yates and it is to Yates that we turn for the definitions of concepts and explanatory statements of the propositions.[18] They are as follows:

1) The strength of instigation to aggression will vary directly with the strength of instigation to the frustrated response.

Yates interprets this to mean that an individual who is strongly motivated to reach a goal will be more strongly instigated to aggression than a weakly motivated individual, if the goal is unattainable, and the strength of the barrier to the goal is held constant in each case.[19]

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[10] Wilfrid Sheed. "This Riotous Isle." *Sports Illustrated* (April 21, 1969) p. 78.

[11] *Sunday Express* (November 8, 1970) p. 17.

[12] J. Dollard, N. E. Miller, L. W. Doob, O. H. Mowrer, and R. R. Sears. *Frustration and Aggression* (New Haven: Yale University Press, 1944).

[13] A. Bandura, D. Ross, and S. A. Ross. "Imitation of Film-Mediated Aggressive Models," *Journal of Abnormal and Social Psychology*, (1963), 66, pp. 3-11.

[14] Hubert M. Blalock. *Theory Construction from Verbal to Mathematical Formulations* (Englewood Cliffs, N.J.: Prentice-Hall, 1969), p. 10.

[15] Hans L. Zetterberg. *On Theory and Verification in Sociology* (Totowa, N.J.: The Bedminster Press, 3rd Ed. 1965) pp. 87-100.

[16] William McDougall. *Outline of Psychology* (London: Methuen, 1923).

[17] Sigmund Freud. *A General Introduction to Psychoanalysis* (Garden City, N.Y.: Garden City Publishing Co., 1943).

[18] Aubrey J. Yates. *Frustration and Conflict* (London: Methuen, 1962).

2) The strength of the instigation to aggression will vary directly with the degree of interference with the frustrated response.

This is interpreted to mean that if two individuals have an equal instigation to a goal response, the individual whose instigation is more strongly prevented from reaching satisfaction will manifest a stronger instigation to aggression. The remaining propositions are as follows:

3) The strength of instigation to aggression will vary directly with the number of frustrated response sequences.

4) The strength of instigation to aggression will vary directly with the number of responses (other than aggressive responses) which are extinguished through non-reinforcement as frustration persists.

5) The strength of inhibition of any act of aggression varies positively with the amount of punishment anticipated to be a consequence of that act.

If the variables contained in these propositions are analyzed it can be observed that frustration and interference can be reduced into one variable. Interference can be defined as the presentation of a competing stimulus which detracts or reduces the effectiveness of the primary stimulus in eliciting the designated response. Frustration can be defined similarly. It is the subjective state of the organism whose goal-object has been denied through the presentation of a barrier type stimulus which interferes with the ability of the organism to obtain the cathected object-choice. In both interference and frustration a competing or blocking stimulus is presented by some agent which reduces the availability of the response necessary to cathect the goal-object. Hence, they are operationally tautological and for the purpose of this paper will be classified as the same.

Proposition 5 is conceptually related to the study by Bandura, Ross, and Ross. They make the following prediction:

> It [is] predicted, therefore, that subjects who observed aggressive models would display significantly more aggression when subsequently frustrated than subjects who were equally frustrated but had no prior exposure to models exhibiting agression.[20]

In the proposition of Bandura, Ross and Ross the observation of an adult aggressive model suggests a degree of permissiveness to the observer which reduces the inhibition of the observer and facilitates the learning of aggressive responses. This reduction in the inhibition occurs because the adult is the agent of reinforcement and punishment and the model for imitation through identification. The observer assumes that aggressive behavior is permitted and the anticipation of punishment as a consequence of aggressive responses no longer inhibits. Hence, this proposition and proposition 5 of Dollard and his colleagues can be reduced into one:

> The decreased anticipation of punishment, incurred through the observation of a permissive model, facilitates the emission of aggressive responses of the observer.

The definitional and propositional reduction is now completed and the following are the result:

1) THE DECREASED ANTICIPATION OF PUNISHMENT (LOWERED INHIBITION) FACILITATES THE EMISSION OF AGGRESSIVE RESPONSES

2) ASSUMING THAT THE CATHECTED OBJECT IS VALUABLE, THE INSTI-

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[19] *Ibid.*

[20] A. Bandura, D. Ross, and S. A. Ross. *op. cit.*

GATION INTO AGGRESSION IS DIRECTLY RELATED TO THE DEGREE OF INTERFERENCE WITH THE ATTAINMENT OF THE OBJECT-CHOICE

Operationalization of the Axiomatic Propositions

Any discussion of operationalization, by necessity, entails a discussion of the selection of indexes which represent the concepts contained within the proposition. For a valid test of a proposition the indicator should have a high correlation or correspondence with the definition of a concept. The index stands in a one-to-one relationship with the concept. Usually this is not achieved and the definition implies the indicator or something less or something more or something other than the indicator.[21]

This first imperative in testing the axiomatic propositions is to ensure that the basic assumptions hold. What is the cathected object and is it valuable? For the purpose of this investigation the fans are vicariously cathecting the same goal-objects as are the players. That is, they wish to experience the elation of victory. There are, however, degrees of elation. Soccer teams compete for two major trophies, the Football Association Challenge Cup and the League Championship Cup. Teams considered to be major contenders for these trophies obviously have more at stake in each game than non-contenders and tend to draw more fans to their games. The best indication of how a team will perform in the quest for these trophies is their performance in the preceding season. To test the basic assumption that there are degrees of cathexis, it is required that the incidence of fan aggression be different for the top-ranking teams than for non-contenders.

The first axiomatic proposition, that of situational permissiveness, will not be tested in that it is fairly constant from one team to the next. All soccer crowds are permissive and consist of individuals engaged in extravagant expression. The strength of the inhibiting responses is, therefore, low. Through week after week of observation, adolescents learn new forms of agressive behavior which would normally be inhibited in the world outside of soccer. Adolescents may conclude that, if the agents of inhibition (i.e. adults) are themselves engaged in the emission of aggressive responses, these responses are legitimate in this situation. The anticipation of punishment as a consequence of aggression is negated.

The independent variable of interference contained in axiom 2 is operationalized in two ways. The first is the *instrumental acts of the referee* who might be considered as an agent of interference or frustration. Soccer is an ambiguous game with a mystifying rubric[22] and demands interpretation of the rules by the referee. Most fans are unable to explain the rubric or the referee's interpretations especially if they do not coincide with their own. The referee often presents a barrier to the attainment of the vicariously cathected object (winning) as the following quotation from Sheed illustrates:

> In a very important recent match the unfortunate official missed the deciding goal completely while recovering from a blow in the chest. He was the only one out of 40,000 or so not to notice that the scorer had touched the ball with his hands.[23]

How do we measure instrumentality of the referee? Match reports in nonsensationalistic press were consulted. The reasoning behind this invoked the assumption that instrumental acts would be reported by the press. The greater the instrumentality, the greater the number of words used in describing the incident.

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[21] Hans L. Zetterberg, *op. cit.* pp. 114-120.

[22] Wilfrid Sheed, *op. cit.* p. 81.

[23] *Ibid.* pp. 81-82.

Proportions of the number of words describing the incident to the number of words used in the total report were used in this investigation.

The second operationalization of interference is *game-outcome*. Opposing teams obviously constitute the major barrior to winning. Hence it would be predicted that the incidence of aggression is greater among losing fans than among winning fans.

The dependent variable contained in axiom 2, instigation to aggression was operationalized using the *extent of damage* caused to the British Railways Special Trains. Instigation is obviously not measurable and the extent of damage is considered as its outward manifestation. The *number of arrests* were also used as a back-up index should the availability of data be restricted.

Hypotheses Generated from the Axiomatic Propositions

1) The amount of damage and/or the number of arrests is directly related to the ranking of the team.
2) The amount of damage and/or number of arrests is directly related to the instrumental acts of the referee in deciding game outcome.
3) The amount of damage and/or number of arrests is directly related to losing games.

The data needed for the validation of the hypotheses generated in the previous discussion will be collected over the next two years by Mr. Nixon from reports made by the British Railway's Police. Initially, it was hoped that data would be made available to us from past soccer seasons. However, negotiations to obtain these data have been largely unproductive. Such hurdles are part of the sociologist's lot when delving into archives not generally considered to be "public."

In order to avoid criticisms that this paper without data is a mere academic exercise, Mr. Nixon and myself have delved into match reports and reports of train vandalism so that some trends could be made available to you at this time. We hope that you will excuse the use of qualitative data especially in the light of the implicit invocation to quantification made in earlier discussion.

We would briefly like to examine hypothesis 3 first. Library research using the *Index to the Times*[34] (The London Times) suggests that the hypothesis is at least feasible. The index includes the heading Railways: Football Excursion Trains for the first time in 1963. Articles cited under this heading were consulted from 1963 to 1969 inclusive. Sixteen articles were available in the edition of the London Times which is microfilmed. These 16 articles concerned with soccer fan vandalism mentioned 18 teams whose supporters were culpable for damage to Railway property. In only two out of 18 cases was damage incurred *on the way to* the game. Fans of winning teams accounted for only one case of vandalism out of the remaining 16 reports concerned with fans *returning from* the game.

Earlier in the paper, we sugested that the value of winning was greater for teams in contention for the major trophies and that teams expected to be in contention could be predicted from the performance of a team in the previous season (hypothesis 1).

After consulting the match reports related to the incidents above, it would appear that the performance in the previous season is only a factor in the first few games where the league title is undisputed. As the season progresses league standings emerge which have significance for the present season's outcomes. Hence, the use of current league standings would increase the predictive/explanatory power of hypothesis 1. A second factor also becomes apparent from the consultation of game reports. Not only does contention produce "needie" but also encounters such as local derby games (i.e. between Manchester City and Manchester United) or relegation/promotion[25] games produce considerable tension. However, the general trend suggested by hypothesis 1 remains. Fifteen reports indicted fans from top-ranked teams or teams involved in the Football Challenge Cup clashes. Of the three remaining reports, one indicted fans from a relegation avoiding team and one indicted fans from a promotion seeking team.

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[34] *Index to the Times* (Printing House Square, London: Time's Newspapers Ltd.).

To this present date, hypothesis 2 remains unresearched either qualitatively or quantitatively. Before concluding, we would like to make some comments on one of the indexes of aggression, namely, the number of game arrests. The number of game arrests was suggested as a back-up index in the event that information concerning the amount of damage incurred by British Rail to their trains was not made available to us. From the initial inspection, this index of aggression does not appear to be a profitable one for research. It is virtually impossible to collect statistics of game arrests on a nation-wide scale as this involves too many divisional areas of police control. The magnitude of this task was diminished by collecting data from one divisional area only, namely, Mr. Nixon's area of domicile, the City of Manchester. Manchester Police are used in the crowd control at Manchester City's Football Ground. The statistics on arrests were made in the 65 home games of the 1968-69 and 1969-70 seasons. Thirty nine of tnese arrests were made in the three games against Manchester United!! Hence, the index lacks the discrimination required for objective research.

Finally, we would like to suggest one other factor (variable) which might account for the problems of crowd aggression. When the various sports' audiences are scrutinized one factor is quite apparent. This is the factor of social class. Most professional sport audiences of any size tend to be from the working and lower-middle classes.[26] This might lead to the hypothesis that fan aggression is a predominantly lower class phenomenon. Recently an interest has been developing in the tolerance of ambiguity. It may well be that the tolerance of ambiguity is related to social class. Soccer being an ambiguous game pushes this tolerance to its limits.

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[25] There are four divisions in English soccer each comprising of between 20-25 teams. These are not equal as in say the divisions of American Football but are ranked: Division One has the Nation's top teams; Division Four has the nation's bottom teams. In each division relegation and promotion occurs on a two-up, two-down basis (i.e. the top two teams of Division Two move up into Division One and the bottom two teams of Division One move down into Division Two.)

[26] Gregory P. Stone. "Some Meanings of American Sport." A paper presented to the 60th National College Physical Education Association for Men, Columbus, Ohio, 1957, p. 26 (Stone's sample was taken from the Minneapolis community).

Hart's Reaction to "Riots on the Rails – An Axiomatic Approach to Collective Behavior"

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Let me preface my remarks by indicating to Mr. Ingham that it is indeed gratifying to me to find someone concerned with the area of collective behavior in relation to sport, since I too have recently become interested in this area. This affords us the opportunity to discuss, delineate, and evaluate pertinent problems dealing with collective behavior as it relates to sport and physical education. To date, very little research has been undertaken in this area. In fact, the only study I am aware of that deals with collective behavior in relation to sports and physical education was carried out by Dr. Seymour Kleinman in 1960 at The Ohio State University.

It appears to me that Mr. Ingham has attempted to integrate social-psychological and psycho-analytic theory. This interdisciplinary approach seems logical and necessary whenever two disciplines are compatible in terms of basic underlying assumptions. Mr. Ingham, then, is contributing to this field of inquiry, in that he is attempting to investigate one aspect of a very important element of human behavior which has been largely neglected by sociologists.

With reference to the theoretical rationale of Mr. Ingham's research, it appears to me that he has done an excellent job in reducing the propositions of Yates. The two resultant propositions should appreciably facilitate the expedition of the study.

Now I would like to direct a few remarks in a more critical vein, beginning with several general comments and concluding with more specific comments regarding the details of the study.

The psycho-analytic theory employed in this proposal was specifically designed for the analysis of separate individuals. One question which may emanate from this experimental design is this, "With the absence of any psychological or personality data, are these propositions applicable in the explanation of behavior of a variety of individuals?" The formulation presented includes inferences about individual psychological states and only vaguely considers collective goals and motives; however, the methods for the assessment of these states are not primarily directed toward individuals, but are more concerned with generalizations about assumed effects of the psychological states collectively.

Another critical comment may concern the definitional confines of the area of collective behavior. This investigation is based upon the assumption that the behavior of sports fans referred to in this study is socially unacceptable and is therefore classifiable as non-institutionalized behavior. Could not this assumption reflect the values and concern of the old social order? One may ask, "By whose standards does this behavior fall outside normal group behavior?" Perhaps the journalists quoted in the paper are of a different social orientation and therefore manifest different behavioral values and patterns from those of sports fans. If this is the case, that which is termed collective behavior is nothing more than normal behavior, and therefore cannot be analyzed by using collective behavior theory.

Though this presentation purports to be linked primarily to the theory of collective behavior, I feel the theoretical structure of this proposal has somewhat neglected essential considerations in the comprehensive interpretation of the theory of collective behavior, except in the classification of crowds.

It appears to me that this study is primarily concerned with causes of goal frustration, with conditions that most readily permit frustration to be manifested in aggressive acts, and with the nature of the resultant aggressive acts. If this is the case, one might consider that the applicability of Smelser's approach to the study of collective episodes has been overlooked. Generally, Smelser's theory considers how collective behavior deviates from normal behavior. A Parsonian in sociological thought, he provides a logical model from which one can analyze any form of collective behavior. His theory is less concerned with crowd classification, weird communication patterns, spontaneity, and illogicalness, which are all commonly discussed and cited by other theorists; but rather Smelser attempts to provide a framework which is applicable to institutionalized as well as uninstitutionalized behavior. Smelser's elements of structural conduciveness, structural strain, and the nature of participant involvement, with which Mr. Ingham is primarily concerned, are of prime consideration in his research approach.

Now I would like to make a few comments in relation to more specific details of the study. I have not deduced any specific solutions to possible dilemmas or problems inherent in this study; therefore, permit me to present some considerations for discussion.

As stated, the purpose of this study is to predict certain conditions which lead to a shift in crowd behavior from individualistic and expressive to individualistic, focused, and active. The statement of purpose assumes that individualistic behavior remains constant prior to and after a shift in crowd behavior. Is it not conceivable that in many instances people on trains would collectively or solidaristically focus on destructive acts thereby negating the assumption of individualism in action?

With regards to another assumption, has there been any unequivocable, or for that matter demonstrable, proof that would lead one to believe that spectators vicariously cathect the same goal objects as the players? Are not professional athletes frequently as much concerned with individual performance and success, as with winning, since personal performance usually leads to contract security and professional advancement?

Another underlying premise which could lead to false conclusions concerns the assumption that higher ranking teams possess higher cathecting potential than lower ranked teams. Is this really true? Or is it because it is more socially acceptable to elicit aggressive and destructive responses when a top ranked team loses a match? It appears to me that if one were extremely attached to a losing team, a win by that team, even though it may be out-of-cup competition, would provide as much cathexis as for a person who identifies with a winning team.

Closely aligned with this last point is the factor of situational permissiveness. How has it been determined that situational permissiveness remains constant with all games? Isn't the importance and seriousness of one's goals considered in other realms of life when one is being punished for some deviant act? (For example, in San Francisco the soldiers who celebrated the end of World War II by looting stores and molesting women were largely exonerated of their crimes because their deviant acts were linked with an important event.) With non-cup games it may be socially unacceptable to exhibit aggressive behavior in the destruction of public property. In such cases instigation to aggression may be just as high as for cup games, but may be manifested in other ways.

Is the referee a real barrier to the cathected object as is assumed in this study, or is he only a scapegoat for aggression once a match has been completed? It seems that referees are usually accepted as legitimate arbitrators and are criticized most often by the losing team only after the termination of a match. If this is true, they could be viewed more as scapegoats than barriers to cathected objects.

Finally in reference to the hypotheses generated from the axiomatic propositions in this study, I feel it would be extremely difficult to control variables other than the three which are cited. For example, the amount of damage and/or number of arrests may be directly related to the volume of intoxicating beverages consumed by the crowd. Crowd composition, climatic conditions, crowded conditions, etc. are other variables to be considered.

In conclusion, I feel it may be advantageous to conduct a pilot study which would test some of the assumptions which this study has not empirically tested, but rather taken for granted. Perhaps this would lend more credence to the results of the study.

Though most of my remarks have been critically oriented, I feel Mr. Ingham has introduced a problem and research approach which are worthy of further investigation. It will be by efforts of researchers such as Mr. Ingham that the fundamental problems which are associated with research in this area can be resolved.

Phillips' Reaction to "Riots on the Rails–An Axiomatic Approach to Collective Behavior"

John C. Phillips
University of Oregon

I wish to limit this brief critique to two points: some problems that I encountered with the operationalized hypotheses and some problems inherent in attempting to explain a collective (social) phenomenon within the framework of a psychological theory.

First, I would like to comment on the fact that Mr. Ingham has done a fine piece of work, not through presentation of data, but through analysis of a theoretical position and its empirical implications. In reading a variety of articles related to the sociology of sport, I have noticed that Europeans tend to emphasize critical thinking, often writing essays rather than empirical articles, while Americans tend to present data, often leaving the reader without a discussion of the theoretical *implications* of that data. Since the growth of a science is based not on the amount of data it can amass but on its ability to conceptualize and explain the data, we can all do well to devote more effort to explanation.

When one attempts to operationalize a concept he runs the risk of losing the abstract meaning of the concept. Since an operationalized concept deals with empirical events, alternative explanations and meanings may, perhaps, be as appropriate as the concept one is trying to operationalize.

Taking the three hypotheses (p. 126 of Mr. Ingham's paper) we can develop alternative interpretations of the variables involved in each. The relationship between damage/arrests and ranking of a team may be explained by greater attendance, hence more candidates for arrest and more arrests (I am assuming that attendance increases for successful teams) rather than by the frustration-aggression hypothesis.

Instrumental acts of the referee are probably more subjective events in the minds of the spectators than objective events. Losers are probably more likely to perceive decisions of referees as in error and such "errors" as instrumental to the outcome of the game. Thus, selective perception may "create" errors by referees in the minds of the spectators and these errors will all be in favor of the opposition. This suggests not frustration-aggression but a crowd response to (in their minds) an obvious injustice. We may see the crowd as bringing sanctions to bear rather than venting its frustration.

Another problem with the hypotheses is their lack of independence. Employing hypotheses one and three we would predict the higher the ranking of a team the more the fans will misbehave and the more a team loses the more the fans will misbehave. But the more a team loses the lower its ranking. Since (I assume) winners are less likely to notice errors of the referee (or more likely to forget them) than are losers, "instrumental acts of the referee" are also related to "ranking of a team" and "losing of games."

Finally, to explain a *change* in the amount of crowd aggression there must be a change in the independent variables of ranking of teams, instrumental acts of referees and losing games. Have not many teams always been competitive, won and lost, and been partly dependent on errors in officiating for their success or failure?

The second criticism I want to make is related to the use of a psychological theory to explain collective (social) phenomena. One of Auguste Comte's reasons for founding sociology was the inadequacy of psychological explanations of social behavior.

As we have suggested above, teams have always lost matches, some teams have always been in contention for championships and referees have always made errors; so if we adhere to frustration-aggression theory we must assume that fans have always been frustrated and expressed this through aggression. But the question is why has there been a change in the *nature* of the aggression? Why have soccer fans who previously cursed and booed begun to damage property (and people)? Frustration-aggression tells us whether aggression will occur, but not in what *form* it will occur; and that is the crucial question. We aren't concerned if a crowd boos, but we are concerned if it attempts to lynch the members of the visiting team—both booing and lynching are expressions of aggression.

While frustration-aggression can partially explain the expression of aggression and learning of an aggressive response through observation of that response (see p. 124), it tells us nothing of why the aggressive behavior, whatever its form, was not subjected to formal or informal social control. Why are some forms of aggressive behavior tolerated and others forbidden? Why don't frustrated-aggressive crowds always attack the referee or opposing team? Why do they sometimes boo, sometimes throw things, sometimes commit mayhem? Why is there more crowd violence among Latin American crowds than English crowds?

I hope this brief critique has served to defend the bastions of sociology against Mr. Ingham's psychological sapping effort. If we are to employ a psychological theory such as frustration-aggression we must be prepared to answer charges of reductionism and show how the dynamics of individual motivation are connected with collective behavior. The extent that this can be accomplished will determine the usefulness of frustration-aggression in the explanation of the behavior and misbehavior of soccer fans.

HISTORICAL RESEARCH THEORY

What Are We Trying to Do? (Theory, Design and Methodology of Historical Research)

Peter L. Lindsay
University of Alberta

The topic is historical research: the plea is for structure.

After reading the many definitions of history which have been attempted over the years, one can only agree with the findings of the Social Science Research Council Committee on Historiography, which concluded that usage of the term "history" is uniform "only in its lack of uniformity."[1] It behooves us then to examine the concept in terms of what we are trying to do, rather than merely to borrow the words of others. In doing so, however, it is assumed that we should remain cognizant of the commonalities evident in the attempted definitions,[2] that is, that a study of history includes not only an examination of available evidence about the past, but also the writing of interpretations in analyses based upon this evidence in such form as will meet the criterion of good literature. In following these through, the historian answers the question raised in the title of this paper.

By using the words, "a study of history," my bias is immediately evident. The term, "history," will be used to refer only to the totality of events which have brought us to where we are. In this form, history is regarded as an abstract quantity lacking in tangible form, and therefore, the task becomes one of searching for the unattainable. In so doing, we produce "histories," or "a history of . . ." but never "the history of . . ." This, at first, seems rather unsatisfactory, for it apparently excludes such ideas as "interpretive history," meaningful history and associated terms. A further premise of this paper, therefore, will be that there *is* no such thing as "interpretive history," only an interpretation or study of such remnants of history, the existence of which, as Gottschalk[3] has cogently reminded us in his *Understanding History*, is rather sparsely limited.

There is another facet of the argument which bears pointing out at this stage. There are very few, if any, physical educators whose jobs solely involve historical research. Our business is education. It is assumed, therefore, that one of the answers to the title question must include some aspect of the aims of education, for example, reflective thinking. The search for data, the questioning of sources, the interpretation of evidence — all these processes contribute to this goal. This is not to say that the building of a field of knowledge is neglected, but rather, that the process of building must be a worthwhile experience in reflective thinking. Nor am I ignoring those who see their task as the betterment of mankind, or as a search for theories of play, or as bringing understanding or perspective to the present. Surely all of these worthy aims involve reflective thinking through research. However, a theory of play will last only as long as it takes to change it, and although Nevins[4] states that history is "a bridge connecting the past with the present, and pointing the road to the future," is there really any present dependency upon the past, and what degree of limitation does our past place upon our present or future actions? If history were a "closed system" then we would be severely limited as to our outcome, but fortunately for mankind, and unfortunately for the rigidly scientific historian, history is an open system, and therefore subject to myriads of independent variables. To neglect this latter aspect is to ignore that history deals with people, not things. Human beings are changeable, fickle, and often unpredictable.

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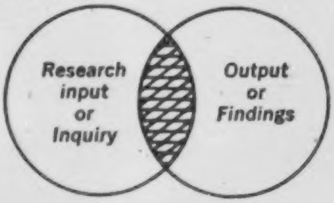
[1] Social Science Research Council, *The Social Sciences in Historical Study*, Bulletin 64 (New York: S.S. Research Council, 1954), p. 3.

[2] The author has refrained from including a list of popular definitions for these are readily available in the literature.

[3] Louis Gottschalk, *Understanding History, A Primer of Historical Method* (New York: Alfred A. Knopf Inc., 1963), p. 45.

Nevertheless, despite these drawbacks for the historian, research must be considered as a systematic process whose immediate object is the acquisition of information. According to Garner,[5] information is transmitted only when there has been uncertainty reduction, or more simply, information is what we obtain when we find out something we didn't know before. It is assumed, therefore, that the aim of research is reduction of uncertainty, or, in the more familiar words of Nevins,[6] "critical inquiry for the whole truth." The following Venn diagram simplifies this approach.



Uncertainty reduced or information transmitted

According to this philosophy, any inquiry not based upon the idea of uncertainty reduction should not be regarded as research. For example, if a history of sport is produced from sound research techniques which uncover all pertinent details, there will be no further information gained when another writer uses the same evidence to produce a similar overall picture. This is not to say that there is no value in author number two writing a more interesting story because of superior literary talents which he possesses over writer number one. The question here is whether the second effort is acceptable as research. There is a demand for background reading material for general perusal produced in as interesting a literary style as possible, but when the product is not based upon uncertainty reduction, then the efforts which produced it should not be regarded as research.

On the other hand, to investigate one or more of the independent variables to show causation which may lead to different, yet acceptable, explanations of previously investigated evidence, is acceptable as research because in so doing, one begins with the premise that uncertainty still exists and a further reduction is being attempted. This new approach to the evidence could only have come about through reflective thinking on the part of the investigator, which brings us back to the concept that we, as educators, are concerned with the educational aspects of historical research. It is here proposed that the more reflective thinking the investigator has to do about uncertainty reduction in his topic, the further along the road towards receiving an education he will advance. History, then, may conceivably be regarded as an intellectual form in which man accounts to himself for his past.[7]

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[4] Allan Nevins, *The Gateway to History* (Garden City, New York: Anchor Books, Doubleday and Co. Inc., 1962), p. 14.

[5] Wendell R. Garner, *Uncertainty and Structure as Psychological Concepts* (New York: John Wiley and Sons, 1962), p. 2.

[6] Nevins, *op. cit.*, p. 39.

The words "intellectual" and "reflective" used above help us to advance to the next stage in research. So far in this paper, there has been little attempt to distinguish between the *amount* and the *value* of obtained information. For a discipline to expand through research, development as well as growth is needed. Amounts of information produce growth, but for development, attention to *value* is imperative. For something to have value it must have contextual relationships or be part of a structure in some way. For example, the figure four has value as being one more than three and one less than five. Amounts of information will produce a stage or a horizontal level, but there comes a time when further research at this level is redundant in that it produces no further information. In order to reach the next level of progression research has to have a value aspect or vertical comprehension in the structure. This might be obtained by rearranging the amounts so that structure is perceived and the overall picture becomes more meaningful. For example, random formation of curling clubs may have meaning through their signification as curling clubs where people meet for recreation, but structure meaning arises when it is observed that nearly all of these clubs were formed at a time when Scottish immigration to the country was high. This structure, then, has signification within a new structure pointing to ethnic influences in sport in that country, and so the building continues. These functions, both latent and manifest, contribute to meaning or structure pattern in some way, and when we say that one thing is more meaningful than another, we imply that more structure is evident.

The inherent danger is that, in our search for meaning, we may elaborate on a structure that barely exists; to which the common sense directive remains —stay within the evidence. It would be unrealistic to conclude that it is necessary to postpone the writing of a history until all the evidence is assembled. This may never be achieved anyway, and rarely does an account ever exhaust its subject. The optimum result to which a writer may aspire is that he make the best use of the data at his disposal. To achieve certainty about a subject as complex as human behaviour is practically impossible. Sensible explanations are about as much as the investigator may hope for in this context, and in striving for such explanations, he moves along the road towards an educational enlightment.

This returns us again to the title question. Physical education historians should be forming a conceptual structure of some kind to guide their research. Long term goals will produce auxiliary short term goals which are within the grasp of investigators. By continuous reference to the conceptual structure investigators will be able to direct their efforts consciously towards step formation.

But more important is the fact that a conceptual structure provides a common orientation for future investigation, so that research efforts are less likely to be redundant. For example, if the structure is concerned with the role of sport or games in society, then some system of categorizing games helps to determine the game tendencies of different societies, as opposed to a method which merely describes the games. In this way, it is possible that we may learn more from "empty" categories than from expectedly filled ones. Thus the amount of information obtained from such an investigation is not so much related to what *did* happen, but rather to what *could* have happened but did not. Similar reasoning may be applied to sport history. If it is observed that certain conditions were present and exerted an influence on the development of several sports, perhaps there is benefit in examining the question, "Why would one think that the same conditions were *not* influential in the development of this other sport?" If there are *no* answers, what is the rationale behind a detailed investigation of the sport in question? Again, it depends on what the investigator is trying to do—write individual sport histories or develop a conceptual structure. Berkhofer[8] may well be correct when he gives priority to "better theory" over "better evidence."

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[7] A short discussion of this idea may be found in Johan Huizinga, "A Definition of the Concept of History," *Philosophy and History*, Raymond Klibansky and H. J. Paton (eds.) (Harper Torchbooks, New York: Harper and Row, 1963), p. 9.

Historical research problems, then, should be approached with some end in view. Planning infers design. If the investigator does not have a clear idea of what he is immediately trying to do, or what his short term goals are, he will have difficulty in planning his strategy. Too often a student will attempt to write "a history of —" with little reflection on why he should want to tackle the project, or what his contribution would be. Some attention to design will help direct him in his approach to the topic so that he may see value in his efforts, which in itself will provide increased motivation. This will be further enhanced by delimiting the topic to digestable proportions.

In research, one of the great fallacies is that a student must have more material at his disposal than he can use. It is just as frustrating to have too much material as too little. If the investigator has an over-abundance of material, as usually happens when "a history of —" is being attempted, how can this "information overload" be handled, bearing in mind the limitations of time and money? The simplest method is to use the "overview" or superficial approach, but once this has been done initially, it ceases to provide information if repeated. There is also the problem for the investigator of how to select material from the stockpile, and in so doing, errors in selection may lead to errors in his interpretation. Asimov[9] sees the problem as analogous to determining the air pressure of a tire by using a tire gauge: a large type gauge, because of its size, allows some air to escape from the tire when a reading is taken, so that the measurement taken is not an exact one of the original tire pressure. Thus the smaller the measuring tool, the less the measurement will be affected and, in principle, the more exact the result. If the ultimate small does not exist, then neither does the ultimate exact. It becomes a matter of time and patience for the historian.

Secondly, in attempting to handle the "information overload," the investigator may decide to group his findings in related "chunks" which can then be handled as units. For example, instead of discussing several activities in detail, he may have to be satisfied with groupings such as "winter activities" or "combative games," to take in a wider sphere. In this procedure, exceptions to the code create problems. Without further elaboration on overload treatment, I feel it is of more importance to draw attention to the restrictive element which this phenomenon places upon the investigator.

Assuming that *as much evidence as possible* is required for presentation, where does the opportunity arise for the investigator to present his own reflections upon his findings? Information overload suppresses reflective thinking, and, therefore, much of the value of the study to the *investigator*. It is our duty, then, to see that a balance is struck between the opportunity for reflective thinking (or interpretation, meaningful explanation, and other related ideas) on the part of the researcher, and information transmission, because it may well be that the latter depends upon the former.

Here, a plea is made for toleration amongst physical education historians. The one-two factor of description and explanation or interpretation which has been proposed by various writers, should be regarded more as a continuum description--interpretation,

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[8] Robert F. Berkhofer, *A Behavioral Approach to Historical Analysis* (London: Collier-Macmillan Ltd, 1969), p. 62.

[9] Isaac Asimov, *The Neutrino* (New York: Doubleday, 1966), p. 170.

and the place of the work along this continuum is determined by the material at hand. If the uncertainty to be reduced is "what happened," then description will occupy much of the investigator's attention, depending on the overload factor. Each time this material is used again, however, in order to keep uncertainty reduction to the fore, the investigation must proceed towards the other end of the continuum, the actual place being determined by the amount of new material to be introduced, which prevents the work from otherwise being largely redundant.[10] Delimitation has not been of great concern in the past, but it is becoming so, as investigators strive for value in their work according to their connotation of structure based upon uncertainty reduction. *Quality* is a very relative concept, and to criticize a work which is largely descriptive just because it *is* descriptive, is to neglect this aspect. A descriptive work may have high quality as a descriptive work and, if it does not purport to be anything else, then it must be examined in the light of what the investigator was trying to do. *Value* is another matter. Gold does not have *value* in itself. Value is the worth we place upon it. Similarly with an historical study, value will be determined by contribution to structure through uncertainty reduction, and should not be confused with quality. The same rationale may be applied to history courses. These may have quality according to such guidelines as suggested by Bennett,[11] and they may be given value depending on what they are trying to produce in the students. Is it not possible that a quality course could have little value?

Clouding the whole issue, certainly, is the basic need for encyclopedias, reference books, and general nontechnical works for public consumption. There is a professional obligation to produce this form of literature and to keep it updated according to current trends. Although such writings have intrinsic worth as basic reference material from which ideas may be launched, and from which general information about unfamiliar subjects may be obtained, yet their value to their compilers from a research or educational point of view can be rather limited. However, research which demonstrates the need for further research projects can, indeed, be quite valuable, although in itself it may have no structural value. All projects should end by pointing the road to further problems. Who is in a better position to judge or highlight related problem areas than the researcher striving for the uncertainty reduction associated with his study? What to do next is nearly always limited by the amount of uncertainty that has been reduced before.[12]

Part of the task in methodology is to sort out relevant facts from the morass of *minutiae* which confronts the investigator. Human performance analysts would refer to this as increasing the signal-noise ratio so that the message is perceived more clearly. To do this the investigator must first be assured that a signal of some kind is indeed present so that he may give more selective attention to it. The use of a working hypothesis is one way of establishing this directional thinking after the early stage of browsing. Irrelevant material (the analogous "noise") is able to be put aside after momentary consideration, so that the relevant details appear in more lucid form. If, however, evidence of another signal begins to build up, then the tentative hypothesis must needs be revised.[13] The question for historians to decide is how far they should proceed if the signal-noise ratio becomes too weak due to lack of evidence. Are they justified in carrying their hypotheses beyond the present evidence, or should they be satisfied in pointing out tendencies? Barbara Tuchman is one who believes in "corroborative detail" which prevents the historian from "soaring off the ground into theories of his own invention,"[14] and that "giving free rein to intuition may be fun, but it is not history."[15] However, Mrs. Tuchman defines history as "the past events of which we have knowledge,"[16] and refrains "from worrying about those of which we have none," so her comments above are consistent. Even Toynbee, who claims that "a disregard for scholarly caution"[17] is a necessary facet of history writing, says there is "no excuse for bad judgment."[18] The caution remains—stay within the evidence.

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[10] Berkhofer, *op. cit.*, p. 293, lists four elements which we may have to consider when determining place within the continuum; general laws of behaviour, social and cultural arrangements, statements of singular causation, and specific statements of fact. Different topics will require different proportions of these four elements.

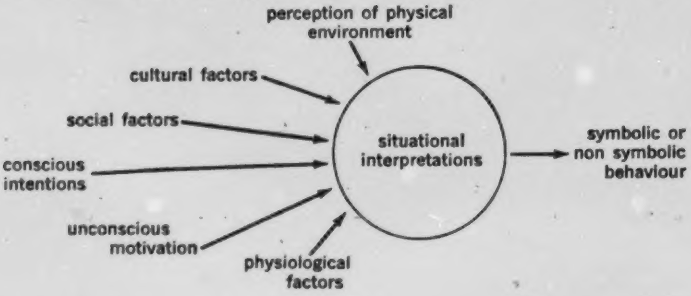
[11] Bruce Bennett, "Improving Courses in the History of Physical Education," *JOHPER* (February, 1966), pp. 26-28.

[12] One could logically deduce that uncertainty is a prerequisite for structure.

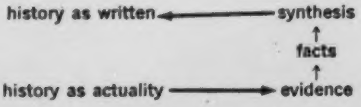
[13] Is it necessary that a hypothesis be stated in the final write up, or is that like reading the end of a book first, to see the outcome?

Evidence, however, must encompass more than artifacts. Mentifacts and sociofacts are evidence which many investigators tend to ignore, but all are important within the concept of structure, and changing attitudes to research. What was Jahn thinking of as he set up his programme at the Hasenheide? What social influences were operative at that time to cause Jahn to think as he did? Were his ideas nation-oriented, Jahn-oriented, or both? To present this type of material, the investigator must bring more of his own reflections to the problem. What sort of a person was Jahn that he would hole up in a cave and hurl rocks at tormentors? What sort of a person would climb to the top of the Arc de Triomphe in Paris and deliver a thunderous oration to the soldiers, at the same time pounding on the lips and trumpet of the Goddess of Victory? Is part of the answer to be found in Treitschke's[19] observation that "it delighted his [Jahn's] heart whenever the Parisians looked at him with angry glances and whispered to one another, 'Le voilà! Celui-ci!' "?

Berkhofer[20] has provided a simple diagram, reproduced below to point out these influences upon a situation:


perception of physical environment
cultural factors
social factors
conscious intentions
unconscious motivation
physiological factors
situational interpretations
symbolic or non symbolic behaviour

This helps to change the traditional approach of:



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[14] Barbara Tuchman, "History by the Ounce," *Harper's Magazine* (July, 1965) 65.

[15] ————, "Can History Use Freud?" *The Atlantic* (February, 1967) 43.

[16] ————, "Can History be Served Up Hot?" *New York Times Book Review* (March 8, 1964)

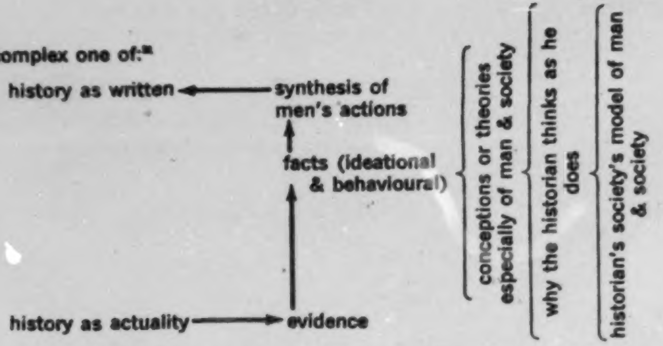
[17] Arnold Toynbee, *A Study of History. Reconsiderations* (New York: Oxford University Press, 1964), XII, 640.

[18] *Ibid.*, p. 641.

[19] Heinrich von Treitschke, *History of Nineteenth Century Germany* (London: Jarrolds Publishers Ltd, 1917), III, 5.

[20] Berkhofer, *op. cit.*, p. 34.

to a more complex one of:[31]


history as written
synthesis of men's actions
facts (ideational & behavioural)
history as actuality
evidence
conceptions or theories especially of man & society
why the historian thinks as he does
historian's society's model of man & society

This immediately presents the concept of the investigator's interpretation, based upon his own background, reacting upon the feedback from the consequences of actions which are available to him and were not available to the actors in history. It is inevitable that this will happen in the writing of history, which is the prime reason why history should be re-examined by each new generation. As Marrou[32] says, "Our ideas about man and his life and the world he lives in are in a continual process of transformation." The educational environment, then, will be enhanced by attention to learning through the application of knowledge, gained during this transformation process, to the field of history. Learning is not seen as an end in itself, but as a contribution to the culture of the day. This is not to say that we do not wish to know this or that particular fact of history, for that would actually hinder the progress of research and of our knowledge of history. Rather, we are placing different values upon pieces of information according to different philosophies. Investigators do not all see *value* in the same light. If one adheres to an essentialistic philosophy, then it may well be that a detailed narrative or descriptive approach fulfills a felt need, whereas a progressivist will demand structure and relevance. Division of labour has always been a facet of society, and there is as much need for detail as there is for relevance. The first stage of inquiry is dominated by a desire to accumulate data and to know more "facts", but once problems have been generated, more "facts" are often of little help. Historical research needs both philosophies, because theory arises from detailed evidence, but progress demands planning, and planning is what is lacking in historical research in physical education at the moment. Where should the emphasis lie?

Historians like to claim that their methods are scientific while the old controversial argument of whether history is an art or a science continues to focus attention and thought on the wrong track. Each subject area lays claim to a method of some kind, but irrespective of what method we, as historians, claim, the questions keep coming back to "What are we trying to do?" and "How best may we achieve this?" It may be argued that the detailed descriptive-narrative approach provides a reservoir of facts for the structuralist to delve into, and that many details would be lost if we attended to relevance only in selection. Yet even the descriptive-historian makes a selection of some kind. What determines his selection process — time sequence, interest, novelty, humour? Also, there can be no doubt that much that has been the preoccupation of the descriptive-historian will, in the future, be taken over by the computer. New facts will merely be added to existent memory banks. What then will be the trend in historical research?

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[31] *Ibid.*, p. 23.

[32] H. I. Marrou, *A History of Education in Antiquity*, trans. George Lamb (Toronto: Mentor Books, New American Library of Canada, 1956), p. xl.

There is one further observation to be made in the examination of the worth of description versus explanation in structure. Many of our history of physical education and history of sport courses are taught on traditional lines. By this it is inferred that a chronological approach is adopted, using description as the basis of instruction. This is not surprising, as description is simple; explanation has proved more difficult. It is far easier to tell *what* happened than *why* it happened. Possession of a much greater fund of knowledge and understanding on the part of the teacher is required to direct students through a reflective thinking, or problem solving, approach to a subject field. A traditional system tends to perpetuate itself unless seriously challenged. Today's students, armed with the campus cry of "Relevance!" are not so much concerned with facts from teachers as they are with honest inquiry and direction; and direction refers to some goal. Zeigler[20] may be well on the way to suggesting a change in attitude with his "persistent problems" approach. Researchers are, or once were, students, and if their research reflects their teachers' attitudes, it is clear where responsibility for some alleviation of the problem lies.

The "relevance" which is today concerning students to an unprecedented degree, may be defined as an attachment to what is important *now*. It would seem, then, that research and teaching efforts should be directed in the main towards understanding today's problems, and how they have arisen and been dealt with in the past. A knowledge of history *may* "enable communities to grasp their relationship with the past and to plan more intelligently for the future; it *may* give to people a sense of continuity and a consciousness of unity in their efforts and achievements,"[21] but it can all seem like so many words to the student whose concern is with the "now generation." If history is to be constantly reviewed and rewritten, then it follows that research will be oriented around what is relevant to this generation, who certainly do not stand in awe of the past.

It has not been my intention in this paper to discuss such worthy topics as source reliability, organization of research reports, narrative exposition, data verification, the use of hypotheses, cultural perspectives, et cetera. Their importance is recognized in methodology. My purpose is to request tolerance, so that the individual may pursue his own way through structure via uncertainty reduction. Research that is largely redundant has proportionately little value, and redundancy may not be realized unless structure is perceived. Such perception is precluded unless we pause, reflect, and reach some agreement on the question of what it is we are trying to do.

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[20] Earle Zeigler, *Problems in the History and Philosophy of Physical Education and Sport* (Englewood Cliffs: Prentice Hall, 1968).

[21] C. V. Good, *Essentials of Educational Research* (New York: Appleton Century-Crofts, 1966), p. 151.

Morford's Reaction to "What Are We Trying to Do?"

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Permit me to express my thanks to Dr. Lindsay for the opportunity to respond to the thoughts expressed in his paper. All of us are, no doubt, deeply concerned about the seeming lack of sophistication in this particular area of our subject field.

A poster currently on display in branches of the Bank of California depicts a turtle with the caption – "Behold the turtle! He only makes progress when he sticks his neck out."

We are indebted to Dr. Lindsay for sticking his neck out so that all of us may make some progress as a result of evaluating his ideas in accordance with our own.

Dr. Lindsay has stated that the purpose of his paper is to plea for structure in research in the historical areas of sport and physical education and further, for tolerance on the part of physical education practitioners in general so that individuals engaging in historical research may pursue their own way through structure via uncertainty reduction or the process of doing research.

Dr. Lindsay has given us a structure of historical research that visualizes at the one end the process of gathering facts about the past with specific reference to sports and games, proceeding on to the organization of these facts into packages with the ultimate reshuffling of these packages, etc., and leading, eventually, to the search for meaning through interpretation and ultimately to theory construction itself. The point is made that any activity at any point along this continuum constitutes acceptable research provided it leads to uncertainty reduction. It is recognized, of course, that the vast amount of physical education research takes place at the lowest level of the structure and Dr. Lindsay warns that the *continued* practice of mere data gathering and its reorganization into different groupings cannot long be considered research since, although new information may, in fact, be added, no further reduction of uncertainty has taken place. Thus, the need to progress along the continuum of the structure towards the important task of theory construction. However, Dr. Lindsay's point is that the historical researcher in physical education must be allowed to attain his maturity or sophistication by proceeding at his own pace along the continuum of the structure.

At this point I must disagree. The fact that physical education research in history is only at the "what happened" stage is due to our own ignorance and lack of background. We have never been able to get our minds above the reporting stage and we have somehow confused ourselves into believing that the paucity of historical facts about our subject field is the cause of, rather than the result of, our lack of knowledge about the process of history. The facts are lying about all over the place, in libraries, archives, museums, archeological sites and classical literature among other locations, but the mere gathering of these details and the sorting of them into new piles does not lead to uncertanty reduction surely since the information was always there. The process of research is only initiated with the gathering of data and its culmination requires much more than the mere reporting of the uncovered facts. It requires, rather, a whole stage of inquiry into the facts in order to arrive at knowledge.

Hughes puts it this way, "Even if we were deluged with artifacts, the problem of historical knowledge would still be with us. Formerly to identify something

— to label it accurately or to locate it in chronological sequence — is not to know it in the historian's usual meaning of the term. Historical knowledge involves meaning." (4 p. 3) Hughes then goes on to say that without meaning, by which is meant the "connectedness of things," historical prose is simply barren chronicle.

Mere data gathering is not research because by itself it does not raise the level of understanding of the phenomenon beyond the collected facts. No matter how rigorously these facts are gathered nor how carefully they are categorized they can remain no more than a description of the facts — lifeless. It takes the art of the historian to put life into the existing data by giving meaning to them.

If what has been called research is confined only to the initial level of the proposed structure, then the phenomenon of data overload does become a very real problem, for if all one is doing with history is collecting, then sooner or later the collector gets bored with one more piece of trivia. Operating at this level the collector has little choice but to place his information (tid bits) in little heaps. Perhaps the worst effect of this style of research is that having no question to answer, it tends to report its findings out of context with the life of the historical period in question. The result is, indeed, a boring and lifeless stringing together of endless details. Information overload, I would suggest, is not a problem of monetary or temporal limitations but of the adequacy of the original question asked. Even the simple question, *Did The Greeks And Romans Play Football?* sets the investigator(10) to searching and selecting information limited to the question. All the stored information about sport in antiquity was insufficient in this instance since it was also necessary to search into the literature of the period as well as the etymology of the Greek, Latin and English languages. In a situation like this, the most trivial piece of information that may well have been discarded by the collector of "what happened," all of a sudden sheds valuable light on this question at hand.

It is, therefore, confusing to me to hear Dr. Lindsay say, on the one hand, that he regards history as the totality of events and, on the other hand, to hear him imply that an approximation of this totality, even at one time or on any one subject, leads to redundancy and superficiality.

But, then, that is the price one pays while pleading for tolerance while we consider ourselves to be researchers when, in fact, we are merely collectors still.

Let us be quite frank with ourselves. Having the facts, knowing what happened is not to understand the events or to recognize the significance of what happened. In order to see what happened there is yet another step beyond the gathering of data and that is, the art of inquiry. This is a step which we, in physical education, have yet to learn to take and until we do our so-called historical research will remain, by and large, mere factual reporting. Moving along the continuum from *description* to *interpretation* is not a matter of new material being introduced, but a question of asking the significance of already existing material. It is, perhaps, not surprising that we in physical education have not learned to take this step yet, since the examples set us by our textbooks, theses and research are, by and large, mere chronological descriptions, lifeless, incomplete and lacking in meaning, to the extent of boring the reader to tears. Small wonder few of our students in physical education express more than a passing interest in the subject of history.

It is not surprising, therefore, that the best insights into questions that ought to be of interest to us have occurred, not within the field, but outside of it. There are scholars from various humanistic disciplines who have inquired painstakingly into the nature of sports, dance, exercise and games and their significance to society within the historical perspective. Examples that immediately come to mind are the works of Pfitzner(9), Henderson(3), Parandowski(8), Marples(7), Dulles(2), and Magoun(6). These studies run the gamut from historical reconstruction to the analysis of influences. Interestingly enough, each investigator must have examined all of the material available in order to determine "what happened," but each treated this aspect of their work, not as a piece of completed research, even though there was information to transmit, but as nothing more than the phase of data gathering so necessary to answer the original question.

I am also a little disappointed to read that Dr. Lindsay has chosen to limit his own horizons as a historian by referring to himself and to all of us for that matter as being in the business of education. For this admitted bias has obviously had some effects on his view point of history.

Thus, I think he is saying that he must include educational aims in what he is trying to do in or with history so as to justify his interest in and involvement with history. The result is that he tends to justify the process of historical investigation as a worthwhile experience in reflective thinking in history as an educational tool.

I wonder why the building of a field of knowledge must be a worthwhile experience in reflective thinking? Surely it is worthwhile if it leads to some conceptual framework from which to better understand man, and as such it is bound to involve a process that we label reflective thinking, which is nothing more than a process and not an outcome. Surely we do not involve ourselves in history so as to encourage the art of thinking reflectively. This is advocating a return to the old faculty theory of learning. Rather, do we not involve ourselves in history because it interests us? It needs no further justification whether we be in education or in collecting garbage. Hopefully though, educators have a greater opportunity for reflective thinking than do garbage collectors.

Seeing himself as an educator has perhaps caused Dr. Lindsay to call for an examination of historical subject matter within a concept of relevance for the "now" generation. He deplores the lack of understanding of historical process and methodology so evident in our field which has led us to the teaching and studying of history in our area of interest in a chronological-descriptive fashion, and I must agree with him. As Dr. Lindsay has pointed out, this merely leads to data accumulation to the point of meaningless particularity and the focusing of students' attention on senseless trivia. However, I cannot go along with Dr. Lindsay's solution to this situation by demanding relevance in history for the "now" generation. Dr. Lindsay's orientation here is grossly simplistic and again, in my view, it is the education bias in Dr. Lindsay's concept of history that leads him to commit what Butterfield(1) has called "the historian's pathetic fallacy."

To arrive at what is important *now*, and therefore relevant does not mean that research in history should be oriented around what is relevant to this generation. Whether they stand in awe of the past or not is irrelevant. This approach to the study of history has been labeled the Whig Interpretation of History by Butterfield(1). "It is part and parcel of the Whig interpretation of history that it studies the past with reference to the present."

In effect, this approach, that is the social reformer's approach to the study of history, is undertaken so as to more effectively discover what is important in the past and, what is important by definition, simply means what is important from the social reformer's point of view. Thus, the Whig claims that it is only in relation to the 20th century that one happening or another in the past has relevance or significance to us in the present. "The Whig interpretation of history is not merely the property of whigs, and it is much more subtle than mental bias; it lies in a trick of organization, an unexpected habit of mind that any historian may fall into." (1 p. 30) It is the result of a practice of abstracting things from their historical context and judging them apart from this perspective. It is Butterfield's thesis that when the organization of general history is undertaken with special reference to the present we, in fact, effect a gigantic optical illusion.

"Real historical understanding is not achieved by the subordination of the past to the present but rather by our making the past our present and attempting to see life with eyes of another century than our own." (1 p. 10) In support, Lovejoy comments, "The more a historian has his eye on the problems which history has generated in the present, or has his inquiry shaped by the philosophic conceptual material of the period in which he writes, the worse historian he is likely to be." (5 p. 179)

Surely, the "now" student must be given to understand that relevance in history is not achieved by the simple assumption that our age is the absolute to which other generations are only relative. For relevance in history is only reached by fully accepting the fact that other generations were as valid as our generation, their issues as momentous as our issues and their day as full and as vital to them as our day and our lives are to us.

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Welch's Reaction to "What Are We Trying to Do?"

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Lindsay raises this prime question in his paper, "What are we trying to do?" One step further is the question, "How do we go about getting the job done?" I wish to begin by addressing my remarks to the latter question.

We have in our profession two types of physical education and sport historians—the Old Guard and the New Breed. The Old Guard, of which I am one, will never be able to "cut the mustard" without radical changes in the methodology of our work. The New Breed, as represented by Lindsay and other specialists, represents the only hope to make the study of physical education and sport history a worthwhile and respectable academic pursuit.

Note that I used the term, "specialists." This is where those of us in the Old Guard have failed and are continuing to fail. Some of the most respected historians in our field are departmental chairmen. Several others are graduate professors teaching and advising on subjects ranging from volleyball to motor learning. These administrators and professors usually have reduced teaching loads, but their range of responsibilities is too broad for them to function effectively in a sub-discipline of physical education which requires more and more expertise. Others of us have full teaching loads. Our work in the history of physical education and sport may be looked upon as a hobby. We chase this subject in our recreational time just as another person chases a golf ball on his favorite course. Check the scholarly output of those in the Old Guard during the past decade. In nearly every case, this productivity, both quantitatively and qualitatively, has not been what a profession would expect from leaders in a sub-discipline. I see no signs of the Old Guard's changing its ways and moving towards more specialization. Therefore, I discount the effect of the Old Guard in the future, and I look to the New Breed to save this sub-discipline.

If you think that I am being unduly hard on those of us who have carried the historical torch in the past, I hold the same belief about some other sub-disciplines in our profession. A good example is the physiology of exercise, for years the Number One sub-discipline of physical education. Here we have had too many men and women who like to think of themselves as exercise scientists because they did a dissertaton in this area and are now teaching one or two courses such as Tests and Measurements and Kinesiology. In addition, they are teaching a half dozen other subjects, coaching a varsity team, and officiating high school athletics "on the side." Check their scholarly output. It is no more impressive than that of the Old Guard in the history of physical education and sport.

Generalization is the key to success for those who desire to be successful administrators, but specialization is the essential ingredient for those who aim to be outstanding researchers and scholars. The New Breed has recognized this dire need for intensive study, teaching, research, and writing in physical education and sport history. Lindsay and his colleagues throughout North America will lead us to the heights which the Old Guard has not been able to attain. Whereas the past is not too much to crow about, the future of our sub-discipline is indeed bright.

Now let me make a few direct comments concerning Lindsay's "Theory, Design, and Methodology of Historical Research." Lindsay stresses descriptive and interpretive studies. Both are necessary, but we have had too many descriptive studies and not enough interpretive studies. Of course, it takes much more skill to do interpretive studies. It is no mean task to do a sound descriptive study. To take the newfound evidence which characterizes a good descriptive study and to make valid deductions requires an additional thrust of some magnitude.

A negative aspect about our descriptive studies is the prevalent practice concerning additional explorations on the same subject. For example, Welch wrote a biography of Edward Hitchcock. We then proceed to tell a student, "You cannot write a biography of Hitchock because this has already been done." Such a practice is unjustifiable when one views the numerous biographies which have been done on Franklin Roosevelt and John Kennedy. Dunbar did a history of the National College Physical Education Association for Men. This does not mean that the subject should be closed. Other students may discover evidence which was not available to Welch and Dunbar.

Then, too, as Lindsay points out, we must press ahead on related and additional studies. In my biography of Hitchcock, I delineated two additional dissertation topics concerning this important figure. The evidence is in one location—Amherst College, Amherst, Massachusetts. My study on Hitchcock was completed eight years ago yet these other dissertations on him have not been attempted.

In regard to interpretive studies, Lindsay cautions that the researcher and writer should stay within the evidence as he engages in reflective thinking and draws conclusions. I would be a bit more liberal than Lindsay. At times the historical writer must be willing to take a chance and use conjecture. Educated guesses comprise much of what we call creative thinking. An example of this is my unpublished analysis of Abraham Lincoln's greatness. Based on a study of the evidence and considerable reflective thinking, I attribute much of Lincoln's greatness to his driving, ambitious wife, Mary Todd. Those of us in the United States should be tremendously indebted to Mary Todd Lincoln. Without her, Lincoln would never have become President and could not have preserved the Union. He would have been content to remain a country lawyer in Illinois. Is my conclusion valid? I have gone out on a limb, and perhaps the prestigious Lincoln historians would cut me down. But to be a creative historian, one must be willing to take an occasional leap. In so doing, he gives a literal interpretation to the title of Carl Becker's book *Everyman His Own Historian.*

Lastly, Lindsay places too much emphasis on "uncertainty reduction" in historical research and not enough emphasis on research for the pleasure and erudition of the individual. His approach is too pragmatic. A better term than "uncertainty reduction" is Jacques Barzun's expression, "liquidation of ignorance."

No one can question the need to encourage our people to study the history of physical education and sport for certain concrete values. All of us know that we become more competent practitioners in our profession when we understand the long-range scope of today's problems. But the study of the history of our field has a tremendous fascination in itself. Bertrand Russell stresses the study of "history as a pleasure, as an agreeable and profitable way of spending such leisure as an exacting world may permit."[1] We want our people to have an interest in history just as we want them to be interested in art, music, poetry, and current affairs. The truly-educated man is a liberally-educated man.

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[1] Bertrand Russell, *Understanding History* (New York: Book Sales, Inc., 352 Park Avenue South, 1957), p. 9.

HISTORICAL RESEARCH

The Use of Psycho-Sociological Models in the Analysis of Historical Data with Special Reference to the History of Physical Activity in Canada

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Lansley and Howell in a recent article comment upon "the new group of humanists in physical education" all of whom have one thing in common, they "tend to examine and use techniques developed by scholars in other disciplines."[1] The use of theories and models is therefore not new; however few sports historians have used psycho-sociological models in the analysis of their data. The use of these models implies a particular view of history; to this writer ultimate history, if it exists, is unattainable and our view of the past can only be obtained through "reconstructed history" of the "recorded past."[2] "Reconstructed history" is never a terminal process as each age re-evaluates history in the light of the needs of the age. Historical studies in the last few decades have become increasingly concerned with society and its problems; this implies an in depth study of the socio-cultural background. The use of models helps the historian firstly "to make a first, rough approximation to the actual state of affairs,"[3] secondly, to develop a theoretical framework to facilitate the examination of the phenomena under study, and thirdly to initiate new lines of thought which clarify the function of physical activity in society. Taken for granted, in this approach, is the painstaking process of collection and evaluation of historical data. Models help facilitate the process of understanding and presenting the historical data.

Two basic limitations which circumscribe this approach must be borne in mind throughout the ensuing discussion. Firstly, the focus of attention is history and not sociology; therefore the various models are to be regarded as means to an end and not ends in themselves. Much opposition by historians, to the use of sociological concepts is a result of misinterpretation of their use; this is one of the major reasons for many historians' condemnation of Smelser's analysis of social change in nineteenth century Britain, in which he fits historical data into a sociological model.[4] The models are to be used as an aid to understanding and nothing more; a coherent interpretation of history can never be gained simply by using sociological theory. Secondly, sociology is concerned with explaining contemporary society in contemporary terms. History deals with the past; concepts and terms such as work, time, leisure, and sport, change in meaning over a period of time. However, an historian must communicate with contemporaries; therefore he must be able to translate or transform archaic concepts into modern terminology. Thus by supplying a framework of ideas and concepts sociology may facilitate communication.

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[1] Keith Lansley and Maxwell L. Howell, "Play Classification and Physical Education," *JOHPER*, (September, 1970) p. 44.

[2] I am indebted to Dr. Guy Lewis for these terms and the implied differentiation.

[3] Alfred Kuhn, *Study of Society*, (Illinois, 1963) p. 37.

[4] Neil Smelser, *Social Change in the Industrial Revolution*, (Illinois, 1965)

Sociological theories and models can be used on various levels to aid in the understanding of history. Perhaps the most difficult and complex is the examination of physical activity in its cultural setting. Kuhn provides a framework for such an undertaking; he advocates the use of systems analysis to facilitate a comprehension of society, using as the basic unit of study the *system of culture* which is comprised of the interaction between an individual or society and the body of culture.[5] On a simple level in a society which has no interaction with any outside group, the society and culture will be practically synonymous. However, at the North American level it is an exceedingly complex system of cultural fusion and diffusion which results in the generation of a new culture which is more than the simple addition of the two cultures of societies.[6] The analysis of physical activity against this theoretical background can be carried on at various levels from a simple examination of the physical activities of two or more societies or cultures to an in depth study of the concepts and motives in a culture and their relationship to the phenomenon of physical activity.

Fig. 1 is a *very much simplified* diagramatic representation of a possible theoretical model of the cultural fusion in Canada to the mid nineteenth century. A brief examination of certain physical activities popular during the 1860's indicates that a process of cultural fusion and/or diffusion has taken place to a certain degree. I will omit consideration of stages 1-3, although some of the processes are outlined in figure 1, and move on to a brief examination of stage 4. It is unlikely that an identifiable Canadian culture existed by 1867, but in terms of physical activity basic common elements were present. Although English speaking people were by this time a numerical majority the essentially Canadian features were in the main, derived from Indian or Franco-Indian sources. It is possible to trace the influence of the Indian, French, and British or should we say English, cultural symbols and the fusion or non fusion of these activities into a Canadian culture. For instance, cricket, one of the most popular games in Canada throughout the nineteenth century, remained a game played primarily by relatively recent British immigrants and never became identified as Canadian. Lacrosse, on the other hand, was an Indian game which was refined by the English and perhaps French Canadians into the game which became identified with Canada. Canoeing and snowshoeing were Indian methods of travel acquired by the French and eventually adopted by many Canadians as a form of recreation. This type of analysis can be used to examine many of the sports and games of any culture. However a word of warning is appropriate; it is just as obvious that many activities will be seen to cross ethnic boundaries; horse racing was popular in both England and France; fighting was practiced in all three cultures. Of course the use of this type of model may serve to point out the games and sports which can be identified with specific cultures. The examination of physical activity as an outward manifestation of culture is only a precursor to an in depth analysis of concepts, values, and ideas which form the core of any culture.

Loy in his article "The Nature of Sport: A Definitional Effort" discusses sport on different levels of discourse; as a game occurrence, as a social institution, as a social situation, and as an institutionalized game.[7] Each of these levels provide examples of concepts which would be of use to the historian. (See Fig. 2) In this instance "Sport as an Institutionalized Game" will be examined to illustrate their use in the analysis of historical data. Firstly, the concept of sport as an institutionalized game can be examined as an historical concept; the historical development of sport in this sense would be of interest to both historians and sociologists. However, the danger inherent in this approach is the imposition of a sociological model upon historical data, this becomes sociology and not history. Secondly, and the approach I will take, the concepts developed as structural foundations of the overall model can be used as base lines for the development of new ideas. No attempt will be made to develop a unified, coherent explanation but rather these concepts act as springboards for the development of ideas which will throw new light upon the form and function of physical activity. To illustrate this process a brief examination of sponsorship and extrinsic technological developments will be undertaken.

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[5] Kuhn, *op. cit.*, p. 206.

[6] *Ibid.*, p. 230.

[7] John Loy, "The Nature of Sport: A Definitional Effort," *Quest Monograph* (May, 1968) 1-15.

The question of sponsorship of sport has not, to my knowledge, been investigated in any depth. Different types of sponsors both in organization and motivation can be discerned in nineteenth century British North America. The earliest clubs were sponsored by the members themselves and were created primarily as social clubs where members could meet and compete with people of their own choosing. Perhaps the first club of this kind was the Montreal Curling Club formed in 1807. After 1820 an increasing number of clubs of this nature were formed in Lower and Upper Canada. Essentially they were middle class groups financially able to sponsor their own activities.

The majority of the inhabitants of Upper Canada had neither the time nor the money to engage in Club activities. There was, however, an institution which acted as a sponsor for various types of physical activities; the tavern, which was the central social institution in the lives of the masses. For instance, in Toronto in 1845 there were one hundred and seven taverns or beer shops for a population of 19,000; in the more rural areas the ratio was as low as one tavern per forty-eight population.[8] The taverns sponsored or organized a variety of activities, some such as the Don Vale and Fox Head taverns near Toronto were known as "Sporting" taverns where "Boxing contests and crude fights as well as gambling, were added to the usual drinking."[9] Later in the century other taverns promoted "dancing, bicycling, and sleighing."[10] Other hotels promoted a wider diversity of activities such as the Peninsula Hotel, Toronto where an amusement park was opened in 1843.[11] It is also probable that the public houses were the training headquarters of the professional rowers, such as Ned Hanlan, who became world famous in the 1870's. The continuity of this tradition to the present day can be noted in the sponsorship of local baseball, basketball, and other teams by taverns in both Canada and the United States.

Commercial promotion of sport for profit has a complex history. There are several apparently independent threads with one factor in common; provision of entertainment for a group of paying customers. This can be divided into the creation of facilities for spectators and participants. At the spectator end of the continuum as early as 1826 a circus entertained the inhabitants of York. The taverns provided opportunities for both spectators and participants and it is likely that much of the stimulus for commercial development of sport came from increased pressure being placed upon the facilities provided in the taverns. At the other end of the continuum was the growth of facilities to meet increased middle class demands for recreational areas. All these factors combined with improved transportation, the process of industrialization, and the movement of the population towards urban areas created conditions which led to the growth of spectator sports in the 1860's and 1870's. The ultimate extension of commercialization of sport as epitomized in the corporate structures which control professional baseball, football, and ice hockey clubs.

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[8] Wm. H. Smith, *Smith's Canadian Gazetteer* (Toronto: H&W Rowsell, 1846)

[9] Edwin Guillet, *Pioneer Inns and Taverns* (Toronto, 1954), I, p. 98.

[10] *Ibid.*, p. 104.

[11] *Ibid.*, p. 142.

	SYSTEM OF CULTURE AT MOMENT OF CONTACT			RESULTANT SYSTEM WITH ANALYSIS		2. PHYSICAL ACTIVITY
STAGE 1	I.S.	I.C.				
STAGE 2	I.S.	I.C.	F.C.	I.S.	F — I C	Use of firearms
	F.S.	F.C.	I.C.	F.S.	F — I.C.	Use of canoes, snowshoes, etc.
				F — I S	F — I C	
STAGE 3	F.S.	F — I C	BR. C	F.S.	F — I — BR C	
				F.S.	F — I C	
STAGE 4	BR. S	B.C.	F.I. C	F.S.	F — I — BR C	
				BR. SOC.	F — I — BR C	
				F — B — I S	F — I — BR C	Snowshoes, carrioles, lacrosse

I — Indian
F — French
Br — British
S — Society
C — Culture

CANADIAN: SM

Figure 1 — Theoretical Model of Cultural Fusion and Diffusion in "Canada," 1534-1860. Based on Kuhn.

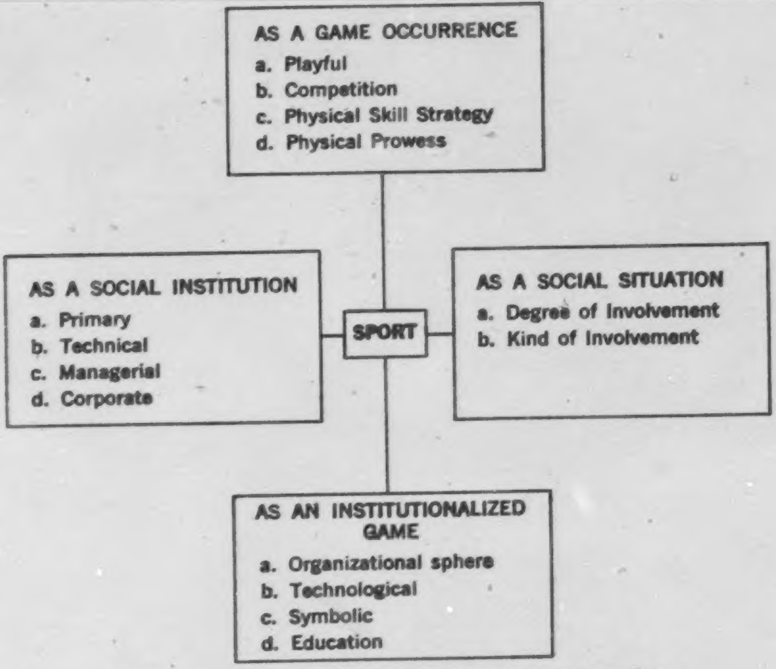
AS A GAME OCCURRENCE
a. Playful
b. Competition
c. Physical Skill Strategy
d. Physical Prowess
AS A SOCIAL INSTITUTION
a. Primary
b. Technical
c. Managerial
d. Corporate
SPORT
AS A SOCIAL SITUATION
a. Degree of Involvement
b. Kind of Involvement
AS AN INSTITUTIONALIZED GAME
a. Organizational sphere
b. Technological
c. Symbolic
d. Education

Figure 2 — Model for Definition of Sport Based upon Loy.

A fourth, unrelated type of sponsorship was the promotion of sport for ideological reasons; or the use of physical activity as a means to an end. In 1883, a Canadian Lacrosse team touring Britain took with them a large quantity of pamphlets extolling the desireability of emigration to Canada; in this sense sport was being used to sponsor immigration. The obvious development of this line of thinking is the use of sport as a political tool which has become so common in the twentieth century. Upon a completely different level was the use of physical activity by the school, church and Y.M.C.A. to develop desireable social behaviors and character traits. As early as 1836 cricket was sponsored by the masters at Upper Canada College, partly for the qualities it was thought to develop and partly for the social benefits of participation in cricket. Later in the century when the cult of "Muscular Christianity" crossed the Atlantic, games were used in the private schools to develop character and other desireable personality traits. Even later when the churches began to widen the scope of their operations physical activities in various forms were used to help develop Christian virtues.

In terms of the technological sphere, an examination of the extrinsic factors is simpler and therefore more productive in a brief paper than the intrinsic technological aspects. Loy defines intrinsic technological aspects of a sport as "those physical skills, knowledge and equipment which are required for the conduction of a given contest per se." Extrinsic aspects include physical equipment such as stadia, physical skills and knowledge possessed by coaches etc.[12] An examination of the development of facilities illustrates the use of this approach. First, sporting facilities were associated with the natural environment; the use of rivers for canoeing in the summer and horse racing in the winter are examples of this. The next identifiable stage was the growth of a traditional location for the performance of some generally accepted activity; perhaps horse racing was one of the first of these. By 1840, at least twelve Upper Canadian towns varying in size from Barrie, population 500 to Hamilton with 6,475, had areas that were referred to as race courses. There are references to English type commons being used for unstructured physical activities, however the first relatively centralized facilities were associated with the taverns. Many taverns had quoit grounds and cockpits attached to their premises while horse races were run on the road outside. In 1837 the Caer Howell Hotel, Toronto contained "a racquet (tennis) court and a sunken terraced bowling green."[13] The transition from this type of facility to commercial arenas is complex; however the development of ice rinks in Quebec, 1852 and Montreal, 1859 immediately preceded the "take-off" phase in the popularization of sport. These facilities were built partially as a result of middle class demand for facilities. With the increased popularity of sport in the 1870's and 1880's specialized commercial facilities were developed which of necessity were multipurpose arenas; for instance Stratford, Ontario in 1895 with a population of 10,000 was served by a ½ mile race track which included a 1/3 mile bicycle track, football, lacrosse, cricket and hockey facilities. The growth of parks and public recreational facilities was generally independent of the commercial developments; but as early as 1853 "Chatham village was granted ten acres of dwindling reserve for a public park." [14] This opens up another area which although not entirely independent is a result of different forces.

I have examined only two sub sections of Loy's definition yet the complex relations which this brief analysis suggests indicate to me a most fruitful area. It must be emphasized that the primary use of this definition is to HELP give INTELLIGIBILITY TO THE PAST. I have not attempted to draw the different lines of thought together since I do not suggest that they can do anything more than indicate lines of thought and areas worthy of investigation.

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[12] Loy, *op. cit.*, p. 64.

[13] Guillet, *op. cit.*, p. 128.

[14] Victor Lauriston, *Romantic Kent* (Chatham: Shepherd Printing Co., 1952) p. 179

The third and final use of models is somewhat different from the preceding examples in that it is an attempt to give a wider interpretation of the relationships between physical activity and the total life of a community. In this instance the interpretation is based on Sherif's classic study on intergroup conflict and cooperation.[15] Essentially Sherif found that two groups isolated from contact with each other and society developed a status hierarchy, group norms, and a system of group sanctions to control behavior. When these groups were brought into competitive situations the result was increased in-group solidarity and cooperativeness and an increase in inter group hostility. The next stage was the "Introduction of superordinate goals which are integral to the situation and which cannot be ignored by the groups in question."[16] In other words goals which presented problems which had to be solved but could not be solved without cooperative effort. The eventual result was a decrease in hostility and increase in inter group cooperation.

The coureur-de-bois or voyageurs of seventeenth and eighteenth century New France, were essentially physical beings; superb physical fitness was basic to survival in the wilderness. The Comte de Frontenac commented of them that;

> Unless one had witnessed it one could not believe the exhaustion of those men, dragging the boats, most of them had been in the water a great deal of the time up to their armpits and bouncing on rock so sharp that some of them had legs and feet running with blood, yet their gaiety was undiminished and as soon as they got back to camp, some of them began to jump about, to perform gymnastics, and all manner of games.[17]

In few other European societies has physical activity been such an important aspect of life; they can truly be called the "Professional athletes" of their times. A brief examination of evidence reveals that they held antithetical ideals to those of the literate society in Quebec; edict after edict was aimed at them, condemning their actions, their way of life, in fact, everything about them. Contemporary accounts are unanimous in their condemnation of the coureurs. Yet all this appeared to have little or no effect for the coureurs continued to flourish.

Sherif's theories can be used to give additional information upon the relationship of the coureurs amongst themselves and between them and the government hierarchy in Quebec. Generally the coureurs went out into the wilderness in groups of 32 with four canoes of eight men forming a brigade.[18] These canoes were, in essence, self contained small groups and the continual references to fighting indicate there was a degree of hostility between them. However, overall unity and cooperation was maintained because of the existence of superordinate goals, in other words their survival in an alien environment of Indians, forest, and weather depended upon mutual cooperation.

More interesting, perhaps, was the relationship between the coureurs and the hierarchy of church, military, and government officials. The whole way of life and value structure of the coureurs was based upon physical prowess; the leaders were the physical leaders, the men who were strongest and had most courage and perseverance. The body was the central symbol of life. This, of course, was diametrically opposed to the value structure and way of life of the governmental hierarchy who emphasized the spiritual and intellectual at the expense of the sensuous and the physical. In fact antithetical ways of life, morals and values. The differences between these groups were accentuated when they came in contact with each other. Their reaction to each other increased the solidarity of both groups and increased the hostility between them.

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[15] Muzafer Sherif et al, *Intergroup Conflict and Cooperation* (Oklahoma, 1961)

[16] *Ibid.*, p. 56.

[17] Raymond Douville and J. Casanova, *Daily Life in Early Canada*, Trans. Carola Congreve (London: George Allen and Unwin Ltd., 1969) p. 150.

[18] Alexander Henry, *Travels and Adventures in Canada and the Indian Territories Between the Years 1760 and 1776.* (Ann Arbor, 1966) p. 14.

The question then remains as to why they retained any relationship with each other. Obviously, in the light of Sherif's findings, the answers are to be found in the existence of superordinate goals. In the first place, they were economically dependent upon each other, the government controlled the flow of furs from New France to the European markets while the coureurs controlled the supply of furs to Montreal and Quebec. This was recognized at the time by the government's attempts to attract the Indians to bring their own furs to fur fairs at Montreal and Three Rivers. Second, the establishments were dependent upon the coureurs to provide protection against the Indians and later the British. At the same time, the elimination of settlement upon the St. Lawrence would have created great difficulties for the coureurs. In essence, these two groups were mutually dependent.

This paper has been a brief attempt to indicate the possibilities of the use of psycho-sociological models in the analysis of historical data. Once again I must emphasize that these are means to an end and because of this I have deliberately refrained from making anything but loosely linked statements. It is as a stimulus to thought that these models are most useful. The indiscriminate use of this type of model is to be discouraged, essentially they should be used in conjunction with the historical data and with a definite approach in mind. In other words, models can be used to help throw light upon areas that the historian has already identified as being pertinent to his topic. However, let me conclude with a restatement of the basic fact that must be borne in mind at all times, we are historians NOT sociologists.

Smith's Reaction to "The Use of Psycho-Sociological Models in the Analysis of Historical Data with Special Reference to the History of Physical Activity in Canada"*

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Let me begin by stating that I am in agreement with Professor Metcalfe's statement that psycho-sociological models should act primarily as historical stimuli to thought and as "an aid to understanding and *nothing more.*" In fact a sociologist like David Reisman suggests a very interesting bit of research which could be carried out historically. Reisman did this in an article titled: "Football in America: A Cultural Diffusion" [with Reuel Denney, *American Quarterly,* III

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* A bibliography is available from the author upon request.

(1951), 309-325]. Reisman, in support of Mr. Metcalfe's contentions, believes that one can tell something of the drive of first and second generation immigrants to America by looking at their rise to prominence in athletics. One could follow up on Reisman's hypothesis by making an historical study of immigration to the United States in the years between 1830 and 1920 and compare them to the All-American football teams starting in 1888. If one could tell the nationality or ethnic background of an All-American by his name or some other means, then he could determine if, in fact, first or second generation immigrants made a greater impact into athletic prominence than their numbers. This, then, might tell us something more concrete about sport as a means of social advancement and sport as an agent for social acculturation.

Professor Metcalfe uses what he terms is a sociological model concerning the sponsorship of sport to help in historical analyses. He states that "the sponsorship of sport has not, to my knowledge, been investigated in depth." In America, if it has not been investigated in depth, it certainly has been investigated, and by historians, primarily. While I am not sure about Canadian sport history, it is quite generally known in American sport history that the tavern was a major sponsor of sporting events from bull baits and horse races, to shuffleboard and quoits. Historians like Foster Rhea Dulles [*A History of Recreation: America Learns to Play*], Jennie Holliman [*American Sports—1785-1835*], Jane Carson [*Colonial Virginia at Play*], and Ruth E. Painter ["Tavern Amusements in Eighteenth Century America," *Americana*, XI (1916), 92-115] have documented this. No sociological model, I'm quite sure, was needed to clarify this point. Indeed, it was historians sifting through primary sources which brought it to the fore.

I suggest that historians' questions more than sociologists' models have opened up questions of the sponsorhip of sport. Let one read the historian Frederick Jackson Turner's history of the American frontier; an example of the sponsorship of sport might come to mind. To Turner the frontier had a unique effect on American culture and democracy. The struggle for survival on the frontier created individualistic, self-reliant men. For economic reasons, individuals were motivated to promote their towns. If a town did not grow, it died. Part of this promotion came through the sponsorship of sports like horse racing. Thus, one could hypothesize that organized sport on the frontier grew as a result of economic need for survival rather than (or in addition to) the general belief that sport grew as a result of a diversion from the hard frontier life.

What I am suggesting is *not* that we should abandon sociological models and theory, but that we might spend more effort taking hints from prominent historians. In our search for historical aids, let us not forget historians. Though I am sure Professor Metcalfe believes this, I am not sure that all people involved in sport history believe it.

Another caution I would like to point out in using psycho-sociological models as historical aids is in the use of psychological or sociological jargon. When we use such terms as "intrinsic technological aspects of sports" as opposed to "extrinsic aspects" (as was noted in the paper) we must remember that most history is narrative—to be good it must be readable. One of the major reasons why sociologists are not generally read by the general public and historians often are, is that the sociologist often loses his audience in definitions and terminology. Most historians let their narrative define their terms. Thus, the art of narrative may be more important for communication than the scientific exactness the social scientist attempts to achieve.

Mr. Metcalfe, I believe, is right when he says that using the sociological model has the inherent danger that may lead to a sociological, not a historical study. History does differ from sociology. For one thing the sociologist desires to formulate general concepts, to discover patterns, generalizations and laws. The historian, while not ignoring generalizations, is most often interested in the unique, the special event, or the outstanding individual. The key word is *unique*. Maybe the danger of using sociological models—and Mr. Metcalfe might agree—is the possible extreme expression in the use of the predictive sociological model; and one might begin believing that the course of history is determined by laws which can be formulated.

Arthur Schlesinger, Jr., is one of many historians who believes like Mr. Metcalfe, in the value, but also in the limits of the social sciences as aids to historical research. Mr. Schlesinger in an article titled "The Limits of Social Science" [in Edward Savath (ed.), *American History and the Social Sciences*, pp. 531-536] states that "empirical research can drive historians to criticize their assumptions, to expose their premises, to tighten their logic . . . , and to restrain their rhetoric," but at the same time he questions how much the quantificationist (the social scientist) can do. He asserts that "almost all important questions are important precisely because they are not susceptible to quantitative answers."

Finally I might say that although I see the possibilities I am somewhat more pessimistic about the value of psycho-sociological models as aids to historical research than is Professor Metcalfe. I am somewhat pessimistic because of the relative immaturity of the researching and writing of sport history; we must become more aware of social and cultural historians and base our theories about sport history on questions which arise out of their research. I will close by saying that where conceptual models for the psychologist and sociologist of sport are only in their formative stages, it might be at least wise to question their value before using them as aids to historical research.

A Comparison of the Effects of Command Task and Individual Program Styles of Teaching in the Development of Physical Fitness and Motor Skills

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Much educational research has been conducted to determine the effects of various instructional methods upon learning. Most researchers have been concerned with a formal teacher-centered style of teaching as opposed to an informal, student-centered style. They have tended to view the teaching process as being polarized around one of these methods, with, perhaps, a third combination type method falling somewhere between the two poles. Mosston,[1] however, has developed a listing of seven "styles of teaching" which is presently exerting a strong influence in the field of physical education.

Mosston provided the first and most inclusive list and definitions of the various styles of teaching and their application to physical education. A style of teaching, as defined by Mosston, is basically a group of decisions made in connection with the act of teaching; and the shift from one style to another is facilitated by a transfer of certain of these decisions between the teacher and student. Mosston lists his styles of teaching along a continuum. The relative position of any style of teaching with regard to this continuum is determined by the number and type of decisions that the student is allowed to make concerning the execution and evaluation of the lesson. The shift from one style to the next level of the continuum is characterized by the transfer of more and more decision-making from the teacher to the student.

While Mosston has refrained from making any direct value judgment concerning the relative values of the various styles of teaching, it is possible that such variations in the manner of class organization and presentation might have a definite effect on the outcomes of the teaching situation. This study, therefore, was designed to compare the effects of the command, task and individual program styles of teaching on the development of physical fitness and the learning of selected motor skills. The sub-problems were: (1) to determine whether a trained observer could, using a modification of the Flanders system of interaction analysis, differentiate between the three styles of teaching used in this study; and (2) to descriptively analyze student attitudes toward the tested styles of teaching.

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[1] Muska Mosston, *Teaching Physical Education* (Columbus: Charles E. Merrill Books, Inc., 1966).

Procedure

One hundred fifteen male college freshmen were enrolled in six separate physical education classes. Each class was assigned to one of three teaching styles according to a table of random numbers. The classes were then taught using their respective teaching styles during their bi-weekly meetings for a period of fourteen weeks. A five-item fitness test and a test on movement skills which required the student to demonstrate seven skills were administered to all subjects during the first, seventh, and fourteenth week of the treatment period.

The teaching styles used in each of the three treatment groups were as follows:

Treatment group I: the command style. In the command style of teaching, all variables of the planning, execution, and evaluation of the lesson were rigidly controlled by the instructor. The subjects were organized into a specific formation determined by the instructor; they were told when to begin exercising, what activities to perform, when to stop, and how many repetitions were to be accomplished. All activities were done in unison by the entire group. The instructor determined the number of repetitions to be accomplished for each activity, and every subject was expected to perform at that level. Students who were unable to maintain the pace set by the instructor were encouraged to "keep trying" or to "keep up the pace."

Treatment group II: the task style. In the task style of teaching the subjects were allowed to vary the execution phase of the exercise program by selecting their own performance goals from a list of goals provided by the instructor. Each subject received an exercise sheet, on which was listed each required exercise, followed by a series of progressively more difficult performance goals. Upon reaching one goal, the subject would merely check it in the space provided and begin striving for the next higher goal. The subjects were also allowed to randomly select their own floor position. The starting time and length of rest intervals between exercises was, likewise, left to the discretion of each subject, within the time limit imposed by the experimental situation. The subjects were told that they must perform each activity once during each exercise period and that they should strive for continual advancement in their performance goals.

The instructor, who in this method was not required to count cadence or lead the exercises, was free to pass among the students giving individual assistance, correction, and encouragement. It was accepted as a basic premise of this style that the increased freedom of the teacher would result in greater interaction between the teacher and individual students.

Treatment group III: the individual program style. In the individual program group the subjects were allowed all the freedom of the task style, but each subject set the goals of execution entirely on his own.

Each subject was provided with a mimeographed sheet similar to those provided to the task group, except that specific execution goals were not provided. Instead, sufficient spaces were provided so that the subject could determine and list his own goals, and progress at his own rate as these factors changed. Each time a goal was reached, the subject recorded it in the space provided, and set a new and higher goal.

Here, too, the subjects were required to perform each activity once during each treatment period, and the instructor was free to pass through the class giving individual assistance wherever necessary. It was assumed here, as it was in the task style, that this higher degree of teacher freedom would result in more interaction between the teacher and individual students.

Interaction analysis. One problem associated with any comparison of teaching methods is the lack of distinction among the tested methods. This lack of distinction leads to two problems. First, if the experimenter has concluded that there are significant differences among the test methods, he is unable to determine whether the differences are due to the style, the teacher, student enthusiasm, or some other unknown factor. Secondly, a lack of significant experimental findings may have been caused by too much overlap between the methods employed. One means of preventing the occurrence of both of these problems is through the descriptive analysis of the teaching process as it occurs in the classroom. This process allows the experimenter to identify and describe teaching procedures in a way not possible under simple pre- and post-test type studies.

While many methods of analyzing the teaching/learning situation have been developed and tested, the most widely accepted method is the interaction analysis technique developed by Flanders.[7,8] The Flanders system is designed to measure the verbal interaction that occurs within the classroom, but it was believed that it would, with slight modification, be equally valuable in the gymnasium.

The Flanders system of interaction analysis consists of ten categories which are classified as either direct or indirect according to the amount of freedom of response allowed the students. Direct teacher statements are of such a nature as to restrict the freedom of the student to respond, while indirect statements tend to maximize the freedom of student response.

For the purpose of this study, two modifications were made in the Flanders system. The first was the addition of an eleventh category, to be used for periods of meaningful non-verbal activity. In this category all periods of silence during which time the student is engaged in meaningful activity were recorded. The second change subdivided the teacher-talk categories by placing an "i" behind the category number observed whenever the teacher was speaking to an individual rather than to the entire group. The addition of category eleven allowed a more meaningful classification of such things as developmental exercises or individual practice on motor skills, during which time there may have been no verbal interaction, but which because of their importance in the physical education program should be differentiated from simple silence or confusion. The second change, the use of the subscript *i*, provides some insight into the amount of individual attention the teacher gives to his students, and thereby enhances the descriptive values of the interaction analysis technique.

A trained observer analyzed the interaction in all test groups during the second, sixth, and twelfth weeks of the treatment period. The analysis of variance for repeated measures technique was used to test the differences between the styles with regard to the following aspects of the matrix: number of i's, extended indirect influence, extended direct influence, proportion of tallies in category 6 (giving directions), proportion of tallies in category 9 (student initiated talk), amount of sustained student talk, proportion of tallies in category 7 (criticism), revised I/D ratio, amount of student talk, and the amount of teacher talk.

Attitude. The assessment of student attitude was accomplished through the use of questionnaires. All subjects were requested to keep a record of the amount of time spent in extra class practice, and these records were submitted anonymously by treatment group at the conclusion of the study. It was hoped that this would provide insight into the effects of teaching styles on student attitude toward voluntary participation in physical activities. As a further attempt to assess student attitudes, an anonymous questionnaire was administered to each student. This questionnaire was designed to test student attitudes toward the style of teaching to which they had been exposed. It was hoped that the combination of these methods would allow for a descriptive analysis of student attitude toward the tested style of teaching.

Results

The significance of the mean score gains achieved by each separate group on the fitness and movement tests used in this study was tested by the analysis of

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[7] Edmund J. Amidon, and Ned A. Flanders, *The Role of the Teacher in the Classroom* (Minneapolis: Association for Productive Teaching, 1967).

[8] Ned A. Flanders, *Interaction Analysis in the Classroom: A Manual for Observers* (Minnesota: College of Education, 1960).

variance for repeated measures with the alpha level set at .05. The Newman-Keuls test was used to determine the location of all significance detected. All groups achieved gains on both the fitness and movement tests which were significant beyond the .05 level. In all treatment groups, significant gains were recorded between the pre- and mid-treatment tests, the mid- and post-treatment tests, and the pre- and post-treatment tests.

The significance of the differences among the treatment groups was tested by the analysis of covariance technique with the alpha level set at .05. The Newman-Keuls test was used to determine the location of all significance detected. It was found that the scores of the command group on the mid-treatment fitness test, when adjusted for the pre-treatment fitness level, were significantly higher than either the task or the individual program groups. There was, at the time of the mid-treatment test, no significant difference between the task and the individual program group. When the post-treatment fitness scores were adjusted for the mid-treatment fitness levels, it was found that the scores of the individual program group were significantly higher than either the command or the task group. There was no significant difference among the three groups when the post-treatment fitness scores were adjusted for pre-treatment fitness levels. The differences in movement test scores between the command and the task groups were not significant in any case.

The analysis of variance for repeated measures was used to test for differences among groups on selected areas of the interaction matrices. With the alpha level set at .05, the following results were found:

1) The task and the individual program groups were significantly different from the command group in the following areas:
   a. revised I/D ratio
   b. percentage of teacher talk that is *I*
   c. amount of extended direct influence
   d. percentage of tallies in category 9 (student initiated talk)
   e. percentage of tallies in category 6 (giving directions)
   f. percentage of student talk
   g. percentage of sustained student talk
2) There were no significant differences among the groups in the following areas:
   a. amount of extended indirect influence
   b. percentage of tallies in category 7 (criticism)
   c. percentage of teacher talk
3) In no case were significant differences found between the task and the individual program groups.

The assessment of student attitude was accomplished through the use of questionnaires. The results indicated that:

1) Many subjects in the command group indicated that they felt their freedom was restricted. This response was less frequently encountered in the task and individual program groups.
2) There was greater amount of dissatisfaction with the teaching style in the command group than in either the task or the individual program group.
3) A greater percentage of subjects in the command and individual program groups would have preferred to have made more decisions, while most of the subjects in the task group were satisfied with the program as it was.
4) Subjects in all groups would have preferred more variety in their programs.

5) Only the task and the individual program groups had subjects who stated a desire for longer classes.

6) Subjects in the command group expressed a desire for more freedom.

7) The subjects in the command group regarded the constant encouragement and prompting offered by the instructor as a good aspect of the program.

8) All groups regarded instructor demonstration of activities and skills as worthwhile.

9) The task and individual program groups indicated favorable responses towards the amount of individual attention provided in the class, and the freedom for individual work which they were allowed.

10) The command group expressed a desire for a higher level of freedom and individual attention. They expressed dissatisfaction with group exercises and the fact that everyone was expected to perform at the same level.

Discussion and Conclusions

The findings of this study tend to support the contention that the real value of the styles is in their manipulation to meet the needs of the situation. If there is to be but a brief training period, and physical fitness improvement is the primary goal sought, then it appears that the command style would be the most efficient instructional method. If, however, the training period is to extend over a longer period of time, or if goals other than fitness development alone are sought, then, perhaps, the task or individual program styles of teaching would be, at least, as effective as the command style. Further support for the value of varying the teaching style was provided by the subjects themselves through the questionnaire, where subjects in all groups indicated a desire for greater variation in the instruction they received. This feeling was shared by the experimenter who found the problem of using a single "pure" teaching style twice a week for fourteen weeks to be extremely tedious and boring.

It was found that a trained observer, using a modified interaction analysis procedure, could differentiate between the command style of teaching and the task and individual program styles. It was not, however, possible to differentiate between the task and the individual program styles. The similarity of the task and the individual program groups cannot be regarded as surprising, since the only difference between the two styles, as defined in this study, was the nature of the worksheet given to the subject. It is evident, therefore, that while this worksheet did have some effect on the performance of the students, it had no such effect on the teacher-pupil interaction.

The task and the individual program styles of teaching can be distinguished from the command style through the use of interaction analysis in the following ways:

1) The task and individual program styles are more indirect.

2) Most of the talk in the task and the individual program styles is directed toward individuals, as opposed to the command style where most of the teacher talk is group oriented.

3) The command style of teaching has a higher percentage of extended direct influence than either the task or the individual program style.

4) There is more student talk, more sustained student talk, and more student initiated talk in the task and individual program styles than in the command style.

5) The command teacher gives more directions than are given in the task or the individual program style of teaching.

It would appear, based upon these findings, that if a teacher wishes to conduct his class in an indirect manner, or seeks student involvement in the interaction process, either the task or the individual program styles of teaching are better suited to his needs than the command style. If, however, the teacher wishes his students to gain practice in responding to verbal directions, or wishes a more direct style of teaching with little student talk, then the command style of teaching would be indicated.

The results of the attitude questionnaire bring to light certain other differences among the styles. The concern voiced by subjects in all groups for teacher encouragement and praise and their desire that these be provided in an individualized manner should be considered in the selection of a "best" teaching style under any given set of circumstances. Bookhout's concern for teacher movement was also supported by the results of this study.[*] Teacher movement was necessary to provide the individual attention which received much favorable comment from the subjects in the task and individual program groups. Furthermore, the absence of this individualization was noted as a shortcoming by many of the command group subjects.

Suggestions for Further Research

1) It is suggested that in any further studies using the interaction technique, category 7, criticism, be subdivided into two areas; criticism of behavior or conduct and criticism of performance or skill execution. This modification should make for a much clearer picture of the interaction within the physical education class.
2) A study should be conducted in which the three styles of teaching are used for an entire school year, to determine the long-range effects of each style.
3) It would seem that valuable information could be gleaned from a following study to determine the effects of the styles on attitudes and participation one, three and five years after the original study.
4) The knowledge of the mechanics of each style of teaching could be greatly increased by an interaction analysis study to determine the amount of variation possible in terms of teacher-pupil interaction within the theoretical limits of each separate style of teaching.

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[*] Elizabeth C. Bookhout, "Teaching Behavior in Relation to the Social Emotional Climate in Physical Education Classes," *Research Quarterly*, XXXVIII (October, 1967), 336-347.

Nixon's Reaction To "A Comparison of the Effects of Command, Task, and Individual Program Styles of Teaching in the Development of Physical Fitness and Motor Skill"

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INTRODUCTION

This critique is divided into two sections:

a) research design and methodological comments;

b) statistical treatment (findings and conclusions) and general observations.

It is important to note at the outset that Dougherty reported only sparse numerical data concerning the research design and virtually no specific numerical and statistical data relevant to the fundamental findings and analyses employed in the study. This is a serious deficiency which does disservice both to the researcher and to the reviewer. The reviewer does not possess enough detailed information to have a basis for valid reactions. The researcher may receive undue criticism mainly because of the above deficiency. Perhaps several of the critique points would not be made if full information were available to the reviewer. The reviewers received an abstract rather than a research report. This paragraph in itself serves as critique point number one.

Research design and methodology

The "Procedure" section is so brief that it leaves many questions unanswered which are fundamental to an understanding of the study and its validity.

What was the basis for the enrollment of the one hundred and fifteen male college freshmen in six separate physical education classes? Were they required to take these classes? Were they volunteers? From what population did they come? Were the classes equal in size? How comparable were they in entering performance in (a) physical fitness, in (b) the movement skills used in the study, in (c) general health status, in (d) previous experience in training for increased physical fitness, and in (e) the formal learning of novel motor skills? Were some of the students being taught by physical education teaching methods which were entirely new to them? In what ways were pupils motivated to work hard and to attempt to perform well throughout the experiment?

It is not clear whether or not one instructor taught all six classes. If so, was this instructor the researcher? If not, how were teachers selected, trained, and assigned to the classes? Did they have to teach with an unfamiliar method?

What time of day were the classes taught? Could this factor influence results? Was attendance essentially equal in all classes?

What was the name of the physical fitness test used? What were its validity and reliability? (Very few physical fitness tests currently in use have demonstrated a high validity, if any at all.) What were the seven motor skills in the experiment? How familiar were the subjects with each of the items in the fitness test and in the skills battery? Were some of these items novel?

It is suggested that two or more criterion tests (for the dependent variable of physical fitness) be used instead of just one. This comment applies to each dependent variable in a study of this type, but here it is presumed that there is only one way to measure performance in the skill tests, namely, performing each skill.

Was the experiment conducted for a sufficient length of time? Can complex motor skills be learned well in twenty-eight sessions held twice weekly?

How was the attitude scale constructed? What basic methodology was employed (by name?) How was it validated and what was its validity? What was its reliability?

The two modifications of the Flanders interaction analysis system appear to be valuable. However, it is not clear how the new eleventh category actually is employed.

The use of a trained observer to analyze the interaction in all classes was a desirable procedure. However, perhaps two or more trained observers should have observed and rated each class independently to provide improved validation.

Statistical treatment (findings, conclusions) and general observations*

Unfortunately, the abstract we received did not contain a single number or table detailing the actual results of the experiment in terms of class means, analysis of variance tables, etc. Therefore, we cannot ascertain how large or small "significant" results were, or whether results in the in-between groups were in fact in between. It is also unclear how the analyses of variance and co-variance were performed.

It is unclear whether the fact that each teaching style was used in two classrooms was taken into account in any of the analyses. *Interaction*—a repeated measures analysis for all three groups across all three times is a reasonable choice here. However, the abstract only tells us that the command group is "significantly different" from the other two groups. It is not specified whether the difference is higher or lower or by how much.

Concerning *fitness* a repeated measures analysis of gain scores for each group needs to be interpreted with some caution especially since it sounded earlier in the report as if fitness were being measured on a five point scale. (A possible ceiling effect?) No evidence is presented of the validity of the analysis of co-variance procedure. Was there actually a significant pre-post *linear* regression in each group? Were the slopes similar in the three groups? One wonders why an analysis of co-variance of post scores adjusted for midterm scores was undertaken when in fact the scores did differ at the midterm point. Because actual group mean scores were not reported for each phase of the study we don't know for certain what the relative positions of each of the three groups (styles of teaching) were at each point in the study. Was the task group mean generally in between the command and individual groups, or not?

One conclusion does not seem to be supported by the information provided in this abstract. It is contended that a fitness class conducted for a "brief training period" could employ the command style as "the most efficient instructional method." However, the only evidence presented is that the command style was superior only at one point in time, the seventh week.

"Instructional fatigue" is described by the investigator. Could it account for the fall off in group difference by the fourteenth week? Or, were the tasks too easy? Did all of the groups perform near the perfect end of the scoring scales by the fourteenth week?

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* My colleague, Dr. Janet Elashoff, Assistant Professor of Education, and a specialist in statistics, School of Education, Stanford University, graciously contributed to this section of the critique.

There is no description of how the pupil attitude scale was constructed, nor was its validity and reliability reported. Even the percentage of responses on each item could have been subjected to a test of significance but apparently this was not done. Because of these deficiencies one cannot place much credence in the observations of the author derived from the attitude scale.

Conclusion

Let it be repeated that undoubtedly the author can answer satisfactorily many of the questions raised in this critique because he has access to the specific data generated in the study which were not available to the reviewers. So, this critique should not be regarded as being overly harsh.

The author is to be commended for undertaking an investigation of this type fraught as it is with methodological and control difficulties. There is a paucity of rigorous research on teaching in physical education and we need to encourage, not discourage, our researchers to contribute their talents and energies to this crucial aspect of our profession.

The author has utilized a complex research design and advanced statistical analyses which represent an encourageing improvement in the quality of this type of research in physical education.

The author is to be praised for the perceptive, relevant, conceptual work which undergirded the formulation of this important study. No study is any more valuable than the theoretical and conceptual bases underlying it.

Finally, let the obvious be acknowledged, it is a million times easier to sit at a desk and critique a colleague's work than it is to go out and perform a similar experiment.

Flath's Reaction To "A Comparison of the Effects of Command, Task, and Individual Program Styles of Teaching in the Development of Physical Fitness and Motor Skills"

Arnold W. Flath
Oregon State University

Dougherty's research paper, "A Comparison of the Effects of Command, Task, and Individual Program Styles of Teaching in the Development of Physical Fitness and Motor Skills" is, to my knowledge, the first attempt to examine three of the seven teaching styles as defined by Mosston in his book, *Teaching Physical Education.* While Mosston has refrained from making value judgements concerning the relative values of the various styles of teaching, this study does reveal judgements that should be helpful to teachers in making some decisions about the employment of these particular teaching styles in the development of physical fitness and motor skills.

The assessment of student attitudes and the distinctions between the task and individual styles from the command style by the use of interaction analysis should be known by those who are attempting to employ these teaching styles. To attempt to use these styles without this knowledge is to continue what might be described as teaching based on speculation and whim on the part of the practitioner—a practice that critics of physical education say characterizes much teaching in our field.

Certainly, Dougherty's suggestions for future research need to be conducted, particularly his suggestion that:

> The knowledge of the mechanics of each style of teaching could be greatly increased by an interaction analysis study to determine the amount of variation possible in terms of teacher-pupil interaction within the theoretical limits of each separate style of teaching.

With continued investigation in this area, the idealistic claims made by some physical educators as to the changes in behavior and changes in attitudes that occur as a result of our contact with students can be verified, altered, or rejected. If what is presented in *Education and Ecstasy* by Leonard and *Future Shock* by Toller is anywhere near the reality for our society and for education in the immediate future, models like Mosston's and investigations like Dougherty's need to be verified, altered, or rejected by physical educators.

An Introduction to Research Methodology Applicable to the Study of International-Comparative Physical Education and Sport

William Johnson
University of Illinois

The central theme of our international relations program at the NCPEAM's Portland Meeting this year will focus upon research methods and techniques applicable to the study of comparative physical education and sport. This topic was suggested as one of major concern by last year's international relations committee at Chicago headed by Dr. Maury Van Vliet of the University of Alberta, Edmonton, Canada. The present committee concurred in the importance of this problem by giving it first priority for this program.

During the past decade and one half, some fifty or more colleges and universities in the U.S.A. and Canada have introduced one or more courses in the area of international-comparative physical education and sport. A number have carried out research projects as well. Direction is needed to coordinate the efforts in this regard, and we are indeed fortunate in having three especially well qualified resource people to present various aspects of research methods and techniques in the comparative area, they are:

> *Dr. Ion Ioannides*, formerly Director of Physical Education and Sport for Greece and presently Distinguished Visiting Professor at Sacramento State College, California, who will discuss "The Proposed Delphic Center of Physical Culture in Greece" and certain other aspects of Grecian Physical Education. The Delphic Center when completed will provide an excellent resource center for research.
>
> *Dr. Earle Zeigler*, Professor of Physical Education for Men, University of Illinois, Urbana who is presently developing the areas of History, Philosophy, and Comparative Physical Education, while teaching, writing, and directing research. He will present a long range research proposal entitled "A Comparative Analysis of Educational Values in Selected Countries: Their Implications for Physical Education and Sport."
>
> *Dr. Nicolaas Moolenijzer*, formerly from the Netherlands, studied and taught in California, and is presently an Associate Professor at the Graduate Center for Physical Education, University of Missouri, Columbia. He has directed many research projects in this area and today he will speak about the central theme of this session.

Methodology in Comparative Education

Comparative education has achieved a certain amount of recognition and status over a considerably longer period of time than has comparative physical education and sport. As one part of education, physical education can gain much by a consideration of comparative education methods used successfully over the years. The mode of inquiry most frequently utilized in comparative education is cultural analysis—i.e., in what sense is the formal system of education an expression of the culture from which it arises?

Don Anthony's article in *Gymnasion* quotes from Sir Michael Sadler (an Englishman who was a founder of the modern study of comparative education) concerning investigational method in this area:

> "In studying foreign systems we should not forget that the things outside the schools matter even more than the things inside the schools, and govern and interpret the things inside . . . But is it not likely that if we have endeavoured, in a sympathetic spirit to understand the real working of a foreign system of education, we shall in turn find ourselves better able to enter into the spirit and tradition of our own national education, more sensitive to its unwritten ideals, quicker to catch the signs which mark its growing or fading influence, readier to mark the dangers which threaten it and the subtle workings of hurtful change? The practical value of studying in a right spirit and with scholarly accuracy the working of foreign systems of education is that it will result in our being better fitted to understand our own."[1]

George F. Kneller, a recognized authority in comparative education, discusses methodology at some length in his section on Comparative Education in the *Encyclopedia of Educational Research:*

> "The extent to which comparison may be used as a reliable method of understanding and solving of education problems is somewhat uncertain. Historically, the assumption has been that comparative education could use the same methods as comparative anatomy, comparative religion, or comparative government. The problem centers on the nature of what is to be compared; on this matter there are at least two schools of thought:
> One school advocates a method derived from one particular foreign system, with comparison, if made, limited to one's own product. The other system judges that comparative education is not worthy of the name unless it deals with the comparing of educational systems.
>
> The method of comparing systems involves both the vertical and horizontal approaches. Both must correspond to the goal the individual sets for himself. The horizontal approach is the more challenging but also the more difficult. This method seeks to analyze educational systems in all their elements and aspects, both separately and collectively. The most characteristic vertical approach is the practice of examining educational systems one by one. Here the comparison with other systems is apt to be incidental or secondary."[2]

The comparative method as recommended by Bereday includes the four stages of Description, Explanation, Juxtaposition, and Comparison.[3] It is discussed in some detail in Zeigler's paper presented at this meeting. It has been adapted to research projects in physical education by a number of researchers recently.

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[1] Don Anthony, "Physical Education as an Aspect of Comparative Education," *Gymnasion.* (ICHPER Magazine, XXXIV. 1:44-61, 1964).

[2] George F. Kneller, "Comparative Education," *Encyclopedia of Educational Research*, 3rd edition. (New York: The MacMillan Co., 1960), pp. 316-322.

[3] George Z. F. Bereday, *Comparative Method in Education* (New York: Holt, Rinehart, and Winston, 1964).

Noah and Eckstein have written at length on comparative education topics. They characterize the development of comparative education as being marked by five identifiable stages ("Travelers' Tales," "Educational Borrowing," "International Cooperation," "Forces and Factors," and "Social Science Explanation").[4] The stress is on a theme of empirical, quantitative research, but they recognize that the problems of education and society also encompass phenomena that are often more amenable to treatment in other ways—as concerns and techniques of the humanist, the philosopher, and the artist.

Recently Completed Research in Comparative Physical Education and Sport

Each of the speakers on the international relations program at this convention will present methods and techniques of research as indicated in the titles of their papers. To supplement their reports, five other examples of completed research or studies now in progress will be presented below:

Example #1. "Physical Education and Sport in Norway,"[5] a comparative analysis by Robert D. Hoff of Eastern Michigan University and Mrs. Randi Norman a secondary school teacher in Norway appeared in the second monograph of the Phi Epsilon Kappa series entitled *Physical Education Around the World.* Similarities and differences in selected phases of physical education and sport were analyzed, and all the stages of Bereday's Comparative Method were utilized in an excellent manner.

Example #2. "Physical Education in Iraq"[6] is an analysis of physical education and sport in Iraq as compared to selected phases in the U.S.A. Nizar M. Al-Talib of Iraq summarized his master's research project completed at The Pennsylvania State University for publication in the Phi Epsilon Kappa series (Monograph #3). Under the direction of Professor Guy Lewis (then at Pennsylvania State), Al-Talib brought out very effectively each stage of comparative method; namely, description, explanation, juxtaposition, and comparison.

Example #3. Don Morrison's study,[7] recently completed at the University of Alberta, Edmonton, Canada, was directed by a graduate committee headed by Dr. Maxwell Howell and included an anthropologist, a historian, and a sociologist. The purpose of the study was to provide a rationale for the development of comparative studies of systems of physical education. A rather elaborate "Conceptual Framework for Analyzing a System of Physical Education" was constructed and could well be adapted to many studies of comparative physical education and sport. It provides a plan for identifying the component sub-systems of physical education and for assessing their structures and functions. Its success depends on its ability to direct the researcher to many of the factors which are relevant for understanding physical education and sport.

Example #4. Darwin M. Semotiuk studying at The Ohio State University, is completing a dissertation under the direction of Dr. Bruce L. Bennett entitled, "The Development of a Theoretical Framework for the Role of National Government Involvement in Sport and Physical Education and Its Application to Canada."[8] Methods of research included a preliminary or developmental stage, and an investigative or applicative stage. Visitation, library research, interviews, and questionnaires all are included as research techniques.

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[4] Harold J. Noah and Max A. Eckstein, *Toward a Science of Comparative Education* (New York: The MacMillan Co., 1969), vii-xi.

[5] Robert D. Hoff and Randi Norman, "Physical Education in Norway," in William Johnson (Ed.), *Physical Education Around the World* (Monograph #2) (Indianapolis, Indiana: Phi Epsilon Kappa Fraternity, 1968), pp. 54-63.

[6] Nizar M. Al-Talib, "Physical Education in Iraq," in *Physical Education Around the World* (Monograph #3) (Indianapolis, Indiana: Phi Epsilon Kappa Fraternity, 1969), pp. 64-71.

[7] Donald H. Morrison, "A Rationale for the Development of Comparative Physical Education," M.A. thesis, University of Alberta, 1967. 163 p. (Available as PE1031, University of Oregon Microcards).

[8] Darwin M. Semotiuk, "The Development of a Theoretical Framework for the Role of National Government Involvement in Sport and Physical Education and its Application to Canada," Ph.D., dissertation in process, The Ohio State University.

Example #5. Eric F. Broom of the University of British Columbia is conducting a dissertation under the direction of Dr. Earle F. Zeigler entitled "A Comparative Analysis of the Central Administration of Amateur Sport and Physical Recreation in Great Britain and Canada."[9] Mr. Broom is currently in England gathering data using several descriptive techniques; he is using both the comparative method and also methods and techniques from the field of sociology.

A Proposal for an International Center: International Delphic Center for Physical Culture

Ion Ioannides*
Sacramento State College

Thank you for the nice words, but I must tell that I am only one of the many who have had this thought of the International Study Center Project in mind. I must also say that the nucleus of this idea was "created" in me while listening to R. Tait McKenzie, the great American leader of Physical Education, in a lecture on "Hellenic Art".

But the present idea for the realization of this thought as an International Study Center of our field was fostered only in 1966 when, as a guest of the U.S. State Department, I visited your country and met some of the finest colleagues.

In the limited time which we have at our disposal, I will bring you, by pictures, to the seat of our future Delphic Center. From there we shall make a visit to the grounds of the hellenic world, where the ideals of physical culture have found a high form of expression.

Delphoi will be the first place to visit. We walk up to the sanctuary. Everything here is of great dimension and the size of everything is most imposing. We start our visit from the Agora. On the right and left are numerous monuments and treasuries. Every important event of the hellenic history is recorded here.

We shall stop a moment at the Athenaian Treasury, and then before the great temple of Apollon. We shall meet the two brothers, Kleobis and Biton, the pentathlon athlete, Agias and, of course, the famous Charioteer that in 474 B.C. had won a victory in the Pythan Games. The stadium and the gymnasium are in separate places, located in most imposing sites.

Before the take-over of the present regime in Greece, there existed in Delphoi a Study Center for Classical Drama financed by the University of California at Berkeley. We shall attend one of the performances of the students.

From Delphoi we sail to Olympia. We shall stop for a moment before the sculptural masterpieces of the Temple of Zeus. They incarnate, better than anything else, the deeper meaning of the Olympic Games—human dignity and peace.

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[9] Eric F. Broom, "A Comparative Analysis of the Central Administration of Amateur Sport and Physical Recreation in Great Britain and Canada," Ph.D., dissertation underway at the University of Illinois, Urbana.

* Dr. Ioannides is the former Consultant and Head of Physical Education in Greece.

During our visit to the stadium, we shall see athletes in their particular events: running, jumping, throwing the discus, as they have come to us in vase-paintings and sculptural creations of artists like Polykleitos, Myron, and others.

Because of the shortage of space, we rush now to Athens. On our way is Korinthos, where the Isthmian Games were held. In Athens we go directly to the Agora, the gathering place of the Athenians. The excavations at this site are by the American School. One of the achievements here is the restoration of the ancient Attalos Stoa. By its appearance and its magnitude, one can form an idea of the other buildings that were here originally.

We shall go up to the Akropolis to admire some of the works of the Periklean Age. We shall certainly visit also the American School of Classical Studies, the oldest and one of the richest centers of archaiognosy that qualified students have the opportunity to attend. The School has a library of over 25,000 volumes. Opposite the School is another center of studies: The Gennadios Library with more than 50,000 volumes, donated by the Carnegie Foundation. We stopped longer at these centers because they have already begun studies which might be of greatest value for the foundation of our future center. Before ending our trip, we shall pay again a short visit to Psatha.

I am most grateful, gentlemen, to the International Relations Committee for giving me the opportunity to meet you. With this occasion, I feel an obligation to thank also all of the many friends who made it possible for me to flee from a most degrading situation that exists now in my country.

The Proposal

This proposal is based on the deep belief that there is a need for an international center for physical culture where students and scholars from all over the world can study and cultivate the cultural background of physical education and of agonistic.

Summary of Purpose

1) Research and study of sources of physical culture with the aim of broadening the cultural background of our field.
2) Promotion of investigation and research relative to current aspects and philosophy of physical education and sport throughout the world.
3) Cultivation of an improved spirit of understanding and fraternal fellowship among members of the profession of physical education and sport.
4) Coordination of physical education and sport activities with other fields of cultural attainment: i.e., music, dance, art, and others.

Organization and Administration

The Delphic International Center will be organized and will operate as an independent, non-profit, international association. This will take place in successive stages. A provisional Committee appointed by the "Friends of the Center" will draft the charter, and will proceed to the official recognition. Various types of membership will be made available to individuals, departments, clubs, and colleges and universities.

Location and Offices

A definite step for the realization of the Center is that there is already an appropriate site of about six acres available. It is at a place named Psatha, on the southern shore of the Korinthian Gulf on the way to Delphoi. It is a completely isolated hill, about 400 yards from the shore, an imposing and scenic location surrounded by steep pine-clad hills. In the far distance one can see the Alkyonides Islands and to the right the shores of Delphoi.

At this location there can be the main seat of the Center with all its establishments: administration building, library, meeting and reading rooms, boarding houses, dining hall, etc. Architectural assistance will be sought for the planning of the entire project which, it is anticipated, will be developed in successive stages as backing becomes available.

Possible Projects for Achievement of Purposes

After having acquired its basic establishments and installations, the Center will organize seminars on cultural aspects of history, of source studies, on the philosophy and comparative aspects of physical education and sport. Distinguished scholars will be invited to coordinate these efforts. The gathering of scholars and students to the homeland of hellenic culture for these seminars will initiate new concepts of study and new approaches in research work. Visits to historical sites and museums will be conducted. Newsletters and other more permanent scholarly publications are planned. It is hoped that groups of physical education students from many countries will have an opportunity to enroll in courses for academic credit at the Center—work that would be coordinated by faculty representatives from the home institution.

For Further Information

To express your interest in the development of this Center, please contact Professor Ion Ioannides, Division of HPER, Sacramento State College, Sacramento, California, 95819. (After June 1971, contact Professor Earle F. Zeigler, College of Physical Education, University of Illinois, Urbana, Illinois, 61801, or Dr. Raymond Ciszek, International Relations Liaison, AAHPER, 1201 16th Street N.W., Washington, D.C., 20036).

A Comparative Analysis of Educational Values in Selected Countries: Their Implications for Physical Education and Sport

Earle F. Zeigler
University of Illinois

Introduction

This proposal for the establishment of a long-term investigation is based on the assumption that there is presently an urgent need for greatly increased development in the comparative and international aspects of physical education and sport. The writer has, over a period of several decades, been identifying and collecting data about some fifteen persistent historical problems in the field of physical education and sport. These "problems" are as follows:

1) The influence of values and norms
2) The influence of politics
3) The influence of nationalism
4) The influence of economics
5) The influence of religion
6) Man's use of his environment (Ecology)
7) Professional preparation
8) Methods of instruction
9) Role of administration, the
10) Health, The concept of
11) Leisure, The use of
12) Amateurism, semi-professionalism, and professionalism
13) Dance in physical education and recreation
14) Physical education and sport for women
15) Progress, The concept of[1]

Social Forces
(#1-#6)

Professional Problems
(#7-#15)

Philosophical Analysis of Persistent Problems

In addition to tracing these problems throughout history, the writer—as a next logical step—believes that various types of philosophizing can and should be employed so that the profession will better understand its present situation in a world in which the actual tempo of civilization is increasing. This investigator has attempted to use what has been called a structural analysis technique in educational philosophy to delineate possible implications from (and *for*) the above-named persistent problems according to the leading philosophical tendencies in the Western world.[2]

Comparative Analysis of Persistent Problems

Concurrently, a further type of scholarly investigation is now needed urgently as the profession of physical education and sport moves into the last third of the 20th century. Along with the increasing tempo of civilization, the "Fourth Revolution" is now upon us, and it is a different sort of revolution that we have been hearing about lately. What is referred to here is the fourth revolution in the area of communications that will in certain specific ways make our earth sort of a "global village."[3] Moving from the invention of speech, to the invention of writing, to the mechanical reproduction of the printed word, and now to relay stations in space, all people on earth will very soon be confronted with a blanketing communications network that will make possible personal relationships hitherto undreamed of by man. This development will have fantastic implications obviously for education and, of course, for physical education and sport.

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[1] Earle F. Zeigler, *Problems in the History and Philosophy of Physical Education and Sport* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1968), p. 2.

[2] ————————, *Philosophical Foundations for Physical, Health, and Recreation Education* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1964).

[3] Isaac Asimov, "The Fourth Revolution," *Saturday Review* (October 24, 1970), 17-20.

This is the highly urgent reason why comparative analysis of international physical education and sport is no longer a "pleasant diversion" and a "broadening experience"—a mere "opportunity to promote international relations and goodwill." As important as these aspects are, the world is now faced with a sort of "race"—a race is on "between the coming of the true fourth revolution and the death of civilization that will inevitably occur through growth past the limits of the third"—a growth that has taken mankind to the point where "signs of breakdown are everywhere, for the problems introduced by our contemporary level of technology seem insuperable."[4]

Proposed Long-Range Study in Comparative Physical Education and Sport

This proposal has as its main problem, therefore, a comparative analysis of the educational values of selected countries in the light of their possible implications for, and effect on, physical education and sport. A secondary, and yet highly important, aspect of this long-range investigation is to establish personal contacts with professional people in the various universities and training schools of other countries who are (or might become) interested in such a "persistent problems approach" to the history, philosophy, and comparative aspects of physical education and sport. (A start was made in this direction when delegates to the First International Seminar on the History of Physical Education and Sport, held at the Wingate Institute for Physical Education in Israel in 1968, were urged to assist and to get involved with this type of development.[5]) Still further, American scholars in physical education and sport with interests in these areas of investigation are encouraged to take part in comparative analysis of this type.

The following selection of countries is recommended for a contrastive study of this type with consideration having been given to their economic and educational status:

1) Argentina
2) Australia
3) China
4) Egypt
5) England
6) Finland
7) Germany
8) Greece
9) India
10) Indonesia
11) Israel
12) Italy
13) Japan
14) Kenya
15) Russia
16) South Africa
17) U.S.A.

Research Methodology and Techniques

Broadly speaking, this investigation will encompass a variety of research methods and techniques. Descriptive method of research should be of the greatest help, but it is quite possible that *historical method* and *philosophic method* will need to be employed as well.

Descriptive method. Before investigators would be able to state a normative pattern for educational values in physical education and sport in one or more countries, they would need to have available certain basic data about each country with which they were concerned. For example, the following data has been initially determined already for the countries recommended for this study:

1) Location and size
2) Geographical features
3) Major cities
4) People, language, religion
5) Type of government
6) Type of economy

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[4] Ibid., 18.

[5] Earle F. Zeigler, "Persistent Historical Problems in Physical Education and Sport," in *Proceedings of the First International Seminar on the History of Physical Education and Sport* (Netanya, Israel: Wingate Institute for Physical Education, 1969), pp. 1-11.

7) Educational pattern
8) Food, etc.
9) National holidays
10) Miscellaneous items[6]

Following this, certain basic questions will need to be asked about the educational systems of the countries involved, and subsequently somewhat similar questions must be answered about physical education and sport. The answers to these questions will be obtained through the employment of (1) documentary analysis (and translators or translations will be needed); (2) personal observation and check list; and (3) closed and open-ended interview questionnaires (with a tape recorder for verification, if possible).

Thus, the educational pattern may be analyzed initially by obtaining the best answers possible to the following seven questions:

1) Is there an active professional group of philosophers, and have they written to any extent about the field of education?
2) Is there a group of educational philosophers, and what types of "educational philosophizing" are they doing with what results?
3) Have the country's educational aims and objectives been determined, and are they available in published form?
4) Is there a "design of action" for education that seems to be practical and attainable?
5) Is there also a design for general professional education of all teachers?
6) Is there any sort of "disciplinary" approach to professional education in which interdisciplinary cooperation is developing with those in the humanities, social sciences, and natural sciences?
7) Does there appear to be any relationship between answers to the above questions and the field of physical education and sport?

Next the pattern in physical education and sport can be determined through the use of the research techniques mentioned above. Here the following questions could well be asked:

1) What does physical education and sport consist of in each country?
2) How are the aims and objectives for physical education and sport determined?
3) What is the source of administrative control, and what form does it take?
4) How is physical education and sport financed?
5) Is there an integrated and articulated curriculum in physical education and sport at all educational levels?
6) To what extent have the following aspects of a "total" program been included in the physical education and sport curriculum?
    a. Aims and Objectives
    b. A Medical Examination
    c. Classification of Students
    d. Therapeutic Exercise Program
    e. Health Instruction
    f. Physical Fitness Conditioning Program
    g. Sports Instruction Program
    h. Elective Program
    i. Intramural Athletics
    j. Interscholastic Athletics
    k. Individual Physical Recreation Program
    l. Evaluation and Measurement[7]

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[6] Elizabeth M. Thompson, *Other Lands – Other Peoples* (Washington, D.C.: National Education Association of the United States, Third Edition, 1964).

[7] Earle F. Zeigler, *Administration of Physical Education and Athletics* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1959), pp. 31-53.

The comparative method as recommended by Bereday can be employed very effectively with this type of descriptive investigation.[8] In such an approach there would be four stages or steps involved as follows:

1) Description—in which descriptive data will be obtained about the plan of physical education and sport in each of the countries being studied.
2) Explanation—in which an attempt will be made to explain the theory and practice in physical education and sport based on the prevailing educational philosophy in each of the countries.
3) Juxtaposition—in which the patterns of physical education and sport in the various countries will be related on the basis of the implications for physical activity according to the educational values existing in each of the countries.
4) Comparison—in which the findings and some reasonable conclusions will be presented based on the similarities and differences. Such final comparison will take into consideration the economic and educational status of the counties being considered.

Recurring Elements and Probable Conclusions

There will undoubtedly be a great number of findings about the status of physical education of sport in the various countries recommended for inclusion in this long range study. This is to be expected and should not concern us unduly. One might hypothesize that just about the same "persistent problems" (as identified earlier) would be present in each of the countries involved. This would most certainly be true for those problems identified as "social forces," but there would undoubtedly be considerable variation in what are considered "professional problems" across the world. Certain priorities would become evident to the investigators immediately, as would some persistent problems that were not even thought of, or considered important, on this continent.

Despite possible disagreement and misunderstanding, the field of physical education and sport can take heart from the relatively recent assessment by Abraham Kaplan of "the new world of philosophy." Most interesting in his work is the identification of a number of themes which he has "identified as recurring elements in the various world philosophies."[9] He explains that these philosophical positions are far from identical, but that they do show a strong "family resemblance" through the following "themes":

1) A theme of *rationality* — the idea that the world is viewed as some sort of systematic unity — causal or historical, constituting a purely natural order or perhaps a moral order as well . . .
2) A theme of *activism* — the idea in this second theme is it that it is not enough to understand only — that understanding should serve as a guide to positive action. Knowledge provides us only "with a map by which to find our way."
3) A theme of *humanism* — the position here is that man is usually central in the "philosophy itself, if not in the world philosophized about." There is a "continuity of man and nature" in both the East and the West. A "theory of human nature . . . is either the starting point or the culmination of the whole movement of thought."
4) A preoccupation with *values* — the view that the life of man should be related strongly to values — especially moral and spiritual. Although it is interpreted in a variety of ways, there is great emphasis on the question

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[8] George Z. F. Bereday, *Comparative Method in Education* (New York: Holt, Rinehart, and Winston, 1964).

[9] Abraham Kaplan, *The New World of Philosophy* (New York: Random House, 1961), pp. 3-12.

> of freedom. In other words, man fulfills his highest aspirations by the realization of values in his life — and not by the mere accumulation of goods and in other material ways.

Thus, as we explain and compare the programs of physical education and sport in these different types of countries all over the earth, we should not expect that they would ever become identical. We can appreciate the need for preservation of indigenous games and physical activities. And we can expect to find many identical and similar persistent problems, as well as "family resemblances" in our physical activity or movement patterns since these recurring themes mentioned above do run through our various "living philosophies." There is no mistaking the fact that values held do influence man's movement in sport, dance, and exercise. In our work with our professional colleagues abroad, we should seek to share, to explain, to listen, and to understand. Internationalism in physical education and sport is truly the highest of the goals for which we as professionals strive.[19]

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[19] Earle F. Zeigler, "Foreword," in William Johnson (Ed.), *Physical Education Around the World* (Monograph #4) (Indianapolis, Indiana: Phi Epsilon Kappa Fraternity, 1970), ix-x.

Move Over Men: The Women Are Coming

James R. Ewers
University of Utah

"Never before has the female been so free from cultural restraints and taboos as she is today. Woman's new role in our society is opening up uncountable opportunities for her to engage in play activities without the restrictions and discouragements she once had to face."[1] Today's women, like many other groups in our society, are attempting to re-program their roles that have been assigned to them culturally. Many activities that society has assigned to "men only" are now quite popular with the ladies of today. Perhaps the political scene has received more publicity where women are involved but the sanctioning of the first woman jockey captured the headlines in the sports' pages for several editions.

It may be difficult for some men and some women to understand why women are seeking these new dimensions or a new identity. However, when one carefully observes the role of sports in the societal structure of today, it becomes easier to recognize why so many persons are attracted to this phenomenon. The manner in which sport and sports figures are glamorized on television, the flattering attire that has been designed for the participants, and the personal satisfaction that is enjoyed by the competitors are reasons enough for more men and more women to be engaged in sports activities. In addition, the more traditional values of sports participation will always be beneficial outcomes of a competitive program. Undoubtedly, there is no one in this room that would denounce the benefits of athletic competition.

For many years a relatively small group of ladies has tried, somewhat unsuccessfully, to promote interschool competition for girls and women. Although the leadership and membership of this group has changed in many ways, their persistence is evident by the happenings that are now taking place. If there are any of you men who are sceptics or doubtful about the future of interschool competition for girls, let us take a careful look at some of the evidence that is before us.

1) The Commission on Intercollegiate Athletics for Women, a part of DGWS of AAHPER was formally approved in March 1966 and began its official operation in September 1967. Specifically the functions of the commission are: (1) to encourage organizations of colleges and universities and / or organizations of women physical educators to govern intercollegiate competition for women at the local, state, or regional levels, (2) to hold DGWS National Championships as the need for them becomes apparent, and (3) to sanction closed intercollegiate events in which at least five colleges or universities are participating.[2]
2) The State of Minnesota has a Girl's Director of High School Athletic Activities. This is the first state to employ a person in this specific capacity.

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[1] Patsy Neal, *Coaching Methods for Women*, Reading, Mass., Addison-Wesley, 1969, p. 1.

[2] Commission on Intercollegiate Athletics for Women, *Procedures for Intercollegiate Athletic Events*, AAHPER, 1970, p. 1.

3) The High School Activities Association of the State of Colorado has hired a lady to direct all sports activities for girls in that state.

4) The State of Colorado has organized an association for coaches, called the Colorado Women Coaches Association. The purpose of the association is to improve, strengthen, and promote girls' competition in sports. The organization, which is less than one year old, has published its first journal, The Coaches' Comments.

5) National tournaments are now being conducted each year in the following sports: (1) golf, (2) volleyball, (3) badminton, (4) gymnastics, (5) swimming, and (6) track and field. The swimming championships attract the most participants. Last year at Illinois State University at Normal, fifty-six colleges and universities were represented. Thirty colleges and universities entered 200 participants in the Second Annual DGWS National Intercollegiate Track and Field Championships held at the University of Illinois, May 1970.

Some of the results of the swimming and track & field championships indicate the quality of performances that young ladies are capable of achieving. Table I includes the first place results of the swimming championship and Table II lists the first place finishers in the track & field competition.

6) Regional conferences are being established such as The Intermountain Conference for College Women's Physical Education. The original purpose of this organization was to introduce skiing as a women's intercollegiate sport in the mountain area. Any college, junior college, or university in the states of Colorado, New Mexico, Utah, and Wyoming is eligible for membership. Idaho State University at Pocatello and Arizona State University at Tempe are also members of the conference.

TABLE I

DGWS NATIONAL INTERCOLLEGIATE SWIMMING AND DIVING CHAMPIONSHIPS
March 19-21, 1970
FIRST PLACE RESULTS

Event	Participants	Team	Final Time
200 Yd. Medley Relay	Bolton, Clark, Estes, and Mathis	Arizona State	1:56.9
200 Yd. Freestyle	Jan Henne	Arizona State	1:57.99
50 Yd. Breaststroke	Carol Gantner	West Chester	:32.95
100 Yd. Backstroke	Patricia Bergman	Ball State	1:02.39
400 Yd. Freestyle Relay	Henne, Heiple, Estes Gatchell	Arizona State	3:44.06
200 Yd. Ind. Medley	Kathy Thomas	Lake Forest	2:14.03
50 Yd. Backstroke	Patricia Bergman	Ball State	:29.19
50 Yd. Butterfly	Marcia Middel	Colorado State	:27.19
50 Yd. Freestyle	Linda Gustavson	Michigan State	:25.49
400 Yd. Medley Relay	Blain, Mathis, Clark and Gatchell	Arizona State	4:16.35
100 Yd. Individual Medley	Patricia Bergman	Ball State	1:02.99
100 Yd. Freestyle	Laura Fritz	Santa Clara	:55.66
100 Yd. Butterfly	Marilyn Corson	Michigan State	1:01.61
100 Yd. Breaststroke	Jan Henne	Arizona State	1:11.8
200 Yd. Freestyle Relay	Henne, Blain, Heiple and Roberts	Arizona State	1:45.26

TABLE II

DGWS NATIONAL INTERCOLLEGIATE TRACK & FIELD CHAMPIONSHIPS
May 29-30, 1970
FIRST PLACE RESULTS

Event	Participants	Team	Final Time
200 Meter Hurd.	Pat Hawkins	Long Island	26.7
400 Yd. Dash	Gale Fitzgerald	Montclair State	56.2
100 Yd. Dash	Judy Murphy	Texas Women's Coll.	10.4
Long Jump	Pat Shipley	Indiana State	18'7¼"
1 Mile	Barbara Lawson	Colorado State	5:02.7
Shot Put	Pauline Thomas	Green River Coll.	43'8½"
100 Meter Hurd.	Patrice Donnelly	Crossmont Coll.	13.5
220 Yd. Dash	Una Morris	Cal. State Poly.	23.9
880 Yd. Run	Terry Hill	Univ. of Tenn.	2:09.7
Javelin	Sherry Calvert	Univ. of So. Cal.	172'10"
440 Yd. Relay		Alcorn College	48.5
Discus Throw	Liz Sharp	Parkland Coll.	136'10½"
High Jump	Connie Peterson	Univ. of Illinois	5'4"
880 Yd. Med. Rel.		Alcorn College	1:47.3

This conference conducts events in twelve sports each year in addition to numberous invitational events and dual competition. The schedule of Intermountain Conference events for 1970-71 includes:

Nov. 7, 1970	Field Hoc. & Bad.	Temple Buell
Nov. 20 & 21	V.B. & Bowling	Metro State
Feb. 6, 1971	Skiing (West)	Fort Lewis
Feb. 26 & 27	Gym., B.B. & Swim.	B.Y.U.
Mar. 6	Skiing (East)	Colorado State
Apr. 30 & May 1	Tennis & Golf	Northern Colorado
May 8	Track & Softball (So.)	New Mexico
May 15	Track & Softball (No.)	Wyoming

To give you an idea of the participation in these events, last year the University of Utah hosted the Gymnastics, Basketball and Swimming Carnival. Thirty-one institutions entered 596 girls in the two-day competition.

In an attempt to gain more insight into the practices and procedures of the ICCWPE institutions, a questionnaire was distributed by Barbara Breeding,[1] Co-ordinator of Women's Physical Education, University of Wyoming, to the member institutions at the October 1970 meeting. The results of this study which appear to be most pertinent to this presentation are:

1) Almost 54% of the intercollegiate teams are organized through the departments of physical education. Twenty per cent of the teams are under the administration of the intramural organization while the remaining teams are identified as sports clubs or directed by a special interest group.
2) The average budget for the intercollegiate teams in the ICCWPE is $3,000 with a range from $500 to $19,000.
3) Monies are allocated from several sources with the most common source being the associated Students Organizations. Some universities reported that funds were allocated from the physical education department, ath-

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[1] Used by permission of Barbara Breeding, Coordinator of Women's Physical Education, University of Wyoming, December 22, 1970.

letic department or from special budgets established by the administration. In more than half of the colleges and universities, the participants pay part of their expenses.

4) In all institutions there was no limit established to the number of games a team could schedule but the limitations were restricted by the budgets.
5) Of the 20 institutions responding to the questionnaire, 31% granted academic credit for participation on an intercollegiate team, while the remaining 69% did not.
6) All 20 member institutions replied that they do not give financial aid to intercollegiate participants based primarily on athletic ability.
7) Eighteen per cent of the coaches reported that they were reimbursed for coaching, 18% indicated that they received teaching load credit for coaching, and the remaining 64% received neither monetary or load reimbursement.

In addition to the qestionnaire, interviews were conducted with representatives of numerous colleges and universities to discuss the problems being encountered with intercollegiate athletic programs for girls and ways in which these problems were being resolved.

Universal problems seem to center around:

1) Faculty available to serve as coaches and administrators.
2) Financing the total program.
3) Adequate facilities available at the "prime" hours.
4) Cooperation of the men who are in administrative positions affecting the program of girls' and women's sports.
5) Ability to control the subsidizing of women athletes.

The success of intercollegiate athletics for girls will depend largely upon the ability of each institution to resolve the preceding problems.

CONSIDERATIONS

Faculty

Some colleges and universities have reimbursed coaches by means of "overload" pay in order to provide proper leadership in this portion of the program. Teaching load credit is another procedure which has been successful in men's athletic programs and is being tried in women's departments where teaching and coaching responsibilities are a part of each faculty member's assignments.

Perhaps one of the most successful means of resolving the faculty shortage, which is reflected by a department's budget, is the employment of "part-time" faculty to serve as coaches for respective teams. This has been a very successful procedure in men's athletics, especially in sports such as golf, tennis, and skiing where outstanding professional personnel are frequently available. Faculty members in other academic departments, high school teachers, and housewives with college experiences in athletics may serve the role very successfully as coaches of girls' intercollegiate teams. In universities where graduate programs exist and graduate teaching assistants are employed, these "junior" faculty members have been used very effectively as coaches.

Finances

Without a doubt, financing programs is the number one problem facing all colleges and universities today. This not only applies to athletics but to all departmental programs throughout the college or university. In many institutions the allocation of monies for student centered activity programs, which includes athletics, is the responsibility of a student governing board. As pressures are exerted from different student groups, including athletic programs for girls, it appears evident that a redistribution of funds may take place if the need is there. Justifying a $200,000 allocation to men's athletics and a $3,000 allocation to girls' athletics, serving approximately the same number of participants is the typical issue facing associated student organization in many universities throughout the country.

Adequate Facilities

With few exceptions, no college or university has adequate physical education, athletic and recreational facilities at the "prime" hours. "Prime" hours would be described as the time between 3:00 p.m. and 6:00 p.m. This is the time of the school day when the majority of classes are concluded and the evening activities have not begun. Men's athletic teams have traditionally conducted their practices at this time. Men's and women's intramural programs have thrived at this period in the day. Faculty recreation and "free play" activities have been very popular in most colleges and universities at this time period. Now the athletic teams for the girls are looking to this same "prime" period of the day for their practice sessions and games.

The obvious solution to this problem is to expand facilities. However, this is not financially feasible in most institutions and it is not very practical.

An alternate solution has been suggested. Recognizing the demands on the limited facilities, perhaps a rotation system could be established in which the facilities were made available at alternate times or days. This may have some merit but it tends to weaken all programs because of the irregular scheduling.

Perhaps the most logical solution may be dictated to each college and university by its Board of Trustees or State Board of Higher Education. This solution is a better utilization of facilities. Many universities have already received this mandate which, in essence, is stating that students and faculty can no longer enjoy the luxury of attending school from 8:00 a.m. to 2:00 p.m. for a nine month period. Department chairmen and scheduling committees are being forced to expand afternoon and evening class offerings and extend the school year to a four quarter system or its equivalent.

You may ask the question, What does this mean to those of us in physical education and athletics? We are presently already utilizing our facilities from 8:00 a.m. to 10:00 p.m. daily on a year-around basis. Think of the following questions.

1) How much use does your swimming pool(s) get during the Autumn and Spring Quarters?
2) What is the load on your basketball courts during the Autumn and Spring Quarters?
3) Is your gymnastics equipment utilized year-around?
4) How many tennis tournaments and meets are included in the men's athletic program in the Fall season?

Questions similar to these were carefully considered by high school athletic administrators in a metropolitan area. Recognizing the limitations of facilities in their schools, they agreed to support a girls' interscholastic program by moving traditionally winter seasonal indoor sports of swimming and gymnastics to the Fall season. By this change, the girls were able to utilize the special facilities at the "prime" hours for their practices and meets.

Naturally, there are short comings to changing traditionally seasonal sports but in many geographical areas of the country the traditional seasons are somewhat ridiculous. For example, spring baseball in the northern states is extremely difficult to justify. Golf and Tennis as spring sports in the same northern states are frequently played under inclement weather conditions. Some conferences regulating men's scheduling and competition have moved to the fall for some golf and tennis tournaments and an abbreviated schedule of events. These changes definitely offer interschool programs for girls some excellent possibilities.

Cooperation of Men

The experiences in athletics (good and bad) that many men have encountered may be most helpful in (1) preparing young men and young ladies as future athletic coaches and administrators, (2) assisting with the development and administering of athletic programs for girls, and (3) coordinating existing athletic programs for men with the growing athletic programs for young ladies.

Diane DeBacy, and others, stated in their recent article in the Journal of Health, Physical Education and Recreation,

> "The manner in which the male population views women's competition and the male attitude toward women who participate in competitive athletics is not merely a matter of passing interest. Not only are male attitudes extremely important to girls and women, but the implications of these attitudes are far-reaching. As future athletic directors and administrative officers, men majors will be instrumental in formulating policies, making decisions, and providing the logistical support which can cause desirable competitive athletics for girls and women to flourish or perish."[4]

Ability to Control the Subsidizing of Athletes

Many of you men can recall the days when you attempted to mold a team from the students who, voluntarily, reported to the first practice of the season. There are still some programs in existence which function this way but most of them would be restricted to the "non-spectator" sports. The football and basketball teams in most intercollegiate programs for men are composed of predominately recruited personnel. As one outstanding football coach said, "Good athletes do not naturally gravitate to our campus."

At this somewhat infant stage in the development of girls' intercollegiate sports, there are very few recruited girls participating. However, as team championships begin to replace the objective of participation and individual satisfaction, then recruiting and subsidizing athletes will undoubtedly accompany this change in emphasis.

This may be the one problem that the ladies will have to resolve themselves. The men have not been very successful in controlling this "injection." Perhaps, the best advice is "Good Luck."

In conclusion gentlemen, in an attempt to collect and relate to you some facts about the status of girls' and women's intercollegiate athletics, perhaps this presentation could more appropriately be titled, "Move Over Men: The Women are Here." After working with the young ladies at the University of Utah for a little over a year, all I can say is "That ain't too bad."

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[4] Diane DeBacy, Rae Spaeth, and Roxanne Busch. "What Do Men Really Think About Athletic Competition for Women?" JOHPER, Nov.-Dec. 1970, pp. 28 & 29.

Student Unrest and Athletic Dollars

Alfred R. Mathews, Jr.
California State College, Hayward

I would like to begin by saying that the topic, along with the title, was given to me. The approach that I have taken is as though the title is "Student Dollars and Athletic Unrest." The "dollars" that I am going to talk about are those that belong to the students. The assumption that the money really belongs to us because we have received it in the past could be symptomatic and explain why the problem exists in the first place.

To say that the topic of "Student Unrest and Athletic Dollars" is a pertinent one to the people in this room is, of course, an understatement. Most of us are vitally concerned with some phase of the intercollegiate athletic program at our respective institutions, and most of these programs are financed at least partly by student body monies. In some schools a certain fixed percentage of this money automatically goes into intercollegiate athletics. In other situations, a budget must be presented yearly for review and approval. Other schools may handle the financing details somewhat differently, but the specific arrangements are not that important to this discussion. What is important is the fact that in the past several years there have been emerging problems with the granting of these monies by the student body governments. What has been almost an "automatic" thing in the past is no longer the case. Students the nation over are demanding to know where the money is going, why certain amounts are needed, and what the rationale is behind the entire program.

These demands have taken several forms: (1) Students have held referendums on campuses and voted against the granting of money to the athletic departments. It is also true that some student body elections have voted in favor of intercollegiate programs, but not much has been heard about these. Obviously, it is better "copy" to write about the negative results. (2) There is at least one state college in California where the students voted to abolish all forms of student body government, and thus there are *no* student body fees. The financing of an intercollegiate program under these circumstances is almost impossible. Finally, (3) In several institutions an even more disruptive chain of events has taken place. The departments involved have presented budgets for the following year to the student body governments currently in office. After much discussion, and in several cases major budget cuts, the budgets were approved and the institutions began scheduling their programs for the following year. When the student body governments for the following year took office, they have refused to abide by the agreements made. In at least one instance, this refusal has even gone to the courts, and the courts have ruled that the agreement is a legal one and must be honored, but the students have appealed this decision to a higher court. What happens in the meantime? I'm sure that chaos has been the result. Programs have been cut back, certain vital parts of programs completely removed, and much time and effort spent in simply getting the finds that were legally allocated.

The questions that our profession must answer are: (1) Why this surge of unrest in the area of athletic finance, and (2) What must be done by our profession so as to be able to continue our program?

First, why are our programs being attacked now more than ever before? Is it just a sign of the times? Is it fashionable to attack anything and everything? Or are there some things that we as a profession have done or are doing that make us especially vulnerable? A careful and critical analysis seems to indicate a combination of factors. It is true that student body governments have never really spoken for the majority of the students. Probably not more than 25-30% of eligible students have voted in student body elections over the country. The key difference now is that the small group interested in student government has changed. It used to be quite a social thing to engage in campus politics. The typical student body officers were students from organized living groups. Now, the small group of interested students is different in several ways. More than ever before in our history, young people are concerned with the problems of society. They are concerned with poverty, racism, war, as never before. They believe that society needs to change and some of them are even attempting to go out into the community to try to bring about change. The types of programs in which they are interested — help to disadvantaged students, child-care centers, political action — cost a great deal of money. It is only natural for these groups to look critically at programs where most of their money is presently spent One of these is, of course, intercollegiate athletics. It makes no difference whether you have a good program or not. You are just "fair game." Most of these students know little about athletics. I have heard statements such as,"Why don't you play all your games at home?" "Do you really need more than $1.00 for dinner on the road?" "Why do you need insurance for the athletes?" The problem from the point of view of the students, can be summarized: You are there; you are established; you use a lot of money; we want that money; it is our money, why shouldn't we have it instead of you?

It also seems to be a time of student disenchantment with athletics. It is in this area that I feel we are more to blame than any other. There was a time when large universities made a lot of money from gate receipts and there was no need to justify programs. Programs were self supporting. Coaches were not hired as regular faculty members. Why? Because the successful ones could be paid thousands of dollars more than full professors. Now the athletic programs of most colleges and universities are losing money. Costs of recruiting, insurance, equipment, and travel have skyrocketed. The changes in the number of games that football teams can have, the fact that Notre Dame now goes to Bowl Games, and the possible limitation on the number of scholarships are both examples of recent attempts to make more money and cut down on costs. These rising costs now make student body fees more necessary than ever before. We have not cultivated or educated the general student. We have not sold him on the merits of our program. Now when we need his support, it is not always granted and I am not surprised.

Many times the student athletes are also "separate" from the rest of the college. They are selected for different reasons than other students. At times they live in dormitories completely apart from the rest of the students. They may have special privileges. Very few take part in student activities, other than the intercollegiate athletic program. Is it any wonder that students would question their money going to such a program?

Athletic programs are also considered to be part of the "establishment." The establishment that certain groups would like to change, or worse than that, destroy. We, as a profession, have not done much to keep our program abreast with the changing ideas of society. Some of us are still concerned with length of hair, sideburns, beards, and dress, rather than performance during practice, in the classroom, and at games. Some of us still set arbitrary training rules based on modes of behavior accepted 20 years ago, and not those of today. When this type of thing continues to happen, it is no wonder to me that there is disenchantment.

I hope that what I have just said will not be taken as an attack on athletics. There are enough of those every day. It is popular, for example, in certain magazines to have a new attack in every issue. This discussion is simply an attempt to explain why we seem to be having more problems now.

What we need to do now, it seems to me, is to direct our energies and our abilities in the direction of making our programs more in tune with the needs of today. The things that need to be done are few and basic.

First, we need to evaluate completely our physical education programs. We need to be sure that what is happening is worthwhile, educationally sound, and is what the students want today. If we offer a broad program, for both men and women at all levels, we will be less susceptible to attack. In our service program we should offer a wide selection of individual activities that are popular today. Activities such as sailing, karate, judo, parachute jumping, water skiing, snow skiing, dance, circuit training, are taken more often today than the typical and traditional team sports. Excellent intramural programs are needed for both men and women, based on the assumption that if competition has educational value, then opportunities for competition must be available to more students. This means that people trained in intramurals must be hired, and they must be given a break in facilities use and budgets. The natural extension of a service program and the intramural program is the intercollegiate athletic program for the highly-skilled performer. This program should be broad and deep and include as many teams as possible for both men and women. The program should have cross-campus appeal, and hopefully, include students from most academic disciplines.

Next, we need to be sure that our coaches and student athletes do not keep themselves separate from the rest of the student body. This means that athletes must run for student body office and be a regular student playing at athletics rather than an athlete playing at being a student. Our coaches need to be regular faculty members. Separate athletic departments are not needed. Coaches must be hired, promoted and granted tenure on the same basis as other faculty members. They need to be a part of the academic enterprise, complete with its benefits and restraints. As regular faculty members, the coaches need to run for faculty government offices, serve on faculty committees, and be active campus wide. What this, of course means, is that we must leave the friendly confines of the gymnasium and the playing field, and become involved with the rest of the faculty. It is time this happened on every campus.

Finally, and most important, is the point about how athletic programs should be financed. We all believe, and we have stated many times, that a broad program of intercollegiate athletics should be considered the same as any other instructional program in the college. If this is so, then why are student body funds needed? Why has the State College Board of Trustees in California recently passed legislation dealing with special funding of instructionally related activities and intercollegiate athletics. Did you notice the wording? Instructionally related activities *and* intercollegiate athletics. This seems to imply that athletics are not instructionally related. At least one Board of Trustees feels that they are not. If this is the situation, then maybe we have no place in an institution of higher education and should be separate from the academic enterprise. Perhaps programs should be financed by gate receipts, gifts from alumni, and whatever student body monies we can obtain.

I personally do not agree with this viewpoint of the California Board of Trustees. It is time for us to convince the legislators that athletics are a unique and worthwhile experience and so should be included in the educational environment, as is art and music. This convincing will take time as the legislators are no longer interested in our words. If we can succeed, then the programs could be financed out of the general fund and any gate receipts would return to that fund. This, of course, would mean submitting budgets through prescribed channels, carefully watching the dollars and making sure the money is well spent. It might mean a drastic reduction in athletic scholarships, or complete abolition of them. The athlete would become part of the regular student body and selected on the same basis. It might mean schedule curtailment — more local games and fewer intersectional games. It would mean that more programs would be student oriented, and less concerned with the community and alumni. The alumni would not be able to hire and fire coaches. Coaches would be retained because of their teaching ability and not because of their win-loss record. Coaches would be taken out of the fund-raising business. Interested students would pay to attend games, or possibly attend free because adequate financing would be received from the institution. Does it sound frightening to you? Not to me. It sounds exciting. It is the direction that we, as members of a profession, should be working toward.

Tenure for Intercollegiate Coaches, Yes or No

Theodore Harder
University of California,
Santa Barbara

Gentlemen, I can assure you that it is a real treat to be on your program and to speak in the subject field in which I started my collegiate teaching some forty-two years ago. Though the last twelve have been entirely in the field of administration, I know full well that I was much happier when I was in the Department of Physical Education and Athletics. If any of you have kept up with the news of the past few years I'm sure you will agree with that statement!

The matter of tenure is one that is again in the news. You see it's a sort of perennial blossoming out anytime there appears to be a problem in the field of Education.

Not too long ago the pressure was in our field and it was we the people in Physical Education and Athletics who were under fire, chiefly because of contract breaking which by its very nature was an argument against tenure.

When Dr. Arthur Gallon asked me to discuss the topic of tenure or not for athletic coaches I was more than willing but I warned him I might hurt a few feelings and my views may not be acceptable to some. Therefore, if I give forth on some views that appear to be 180 degrees off the generally accepted version blame it on Art for inviting me here. I might explain the reason perhaps for my being a 180 degrees off course is not because I'm no longer involved in coaching but rather because after 42 years in the field I have come to view the problem in a different light.

Basically we must ask ourselves do we want tenure? And in speaking of tenure I mean tenure in the sense we see it applied to our colleagues in the other academic departments. You'll note I used the phrase "other academic departments." I know many will challenge this statement, but in my book Athletics, Physical Education, Physical Activities or whatever you call it has as much right to be regarded as academic as do the sensitivity courses taught by some departments or the modern metal art work that is nothing but downright poor welding and would certainly qualify for a failing grade in a shop course at any high school!

Let me get back to the basic question. Do we honestly want tenure? I'm not referring to faculty status where one may be a member of the academic senate or bear a professorial title at some level of the professorial ladder. I mean tenure in the sense of a guaranteed job! What do we gain by this?

1) True, a steady job but will it be in our field or specialty.
    a. Perhaps not if you don't win consistently.
    b. If not a winner, it may lead to other assignments within or outside the department of some lesser responsibility and of lesser prestige.

Now if this is what you want then OK it's your dish but where does this measure up to what we tell our players, things like:

1) Pride in your work.
2) Character to stand up and be counted.
3) The comeback spirit, that of never giving up!
4) How can you relate this to the old saying of "A team that won't be beat, can't be beat."
5) Do you recall the furor of a few years back when Notre Dame settled for a tie with Michigan State? Many felt this was counter to the principles we teach.

When we accept this lesser assignment it appears to me we have about made up our minds that "just being close" is good enough! It might be for some, but many have said "it's winning that counts!"

Let us now look to the other side of the coin. What do we lose by tenure?

I realize there are many institutions that do not have a standard salary scale for faculty members based on rank. However, recent studies show the trend is strongly toward a set standard salary scale that is based on the rank of the faculty member. True progression within the rank, and thus salary, can vary depending on research, national recognition, publication, etc. but nevertheless the standard is adhered to.

Now it is quite obvious that to demand and receive tenure we would of necessity be bound by the existing salary schedule for it is not likely that a separate above scale salary would be established for coaches alone. Thus we must recognize the possibility of a coach getting more than the Dean or next to the President or Chancellor is quite slim.

Secondly progression within rank, and in fact progression to a higher rank, would be reviewed by a committee that may or may not be favorable to athletics. I could point out a few on our faculty that I hate to have review me, even though I haven't coached in 18 years! That what they regard as a stigma lingers on and is accentuated when some old grad, while in their presence, refers to me as "Coach!"

Thirdly, assuming that we are subject to review for advancement even by our own colleagues or those favorable to athletics, what standards shall they use?

1) Winning?
2) Character or conduct of the players in a manner bringing credit to the institution?
3) Number of professional, All American or All Conference players developed?
4) Teaching? If so, by what kind of teaching? Understanding of the game? Knowledge of execution of a certain skill though he himself may be unable to perform it?
5) Loyalty he develops among his players? Oftimes this does not become evident until years later, for in the excitement of victory many coaches are carried off the field on the shoulders of players some of who do so because of emotion while others do it to curry favor hoping to start the next game.

I recognize there are many who view the remarks I have just made in a context far different from others in our audience. Perhaps it can all be boiled down into one phrase and this is one generated by our fellow faculty members of the Econ Department. I refer to the principle of "free enterprise."

If you subscribe to this principle then I think one must admit tenure is bad for it limits one in the degree to which he is free to progress.

I'd like now to say a few words in comparison of the principles we are discussing, namely the coach versus the faculty man.

Whereas we are prone to judge the coach on a win-loss basis there are no corresponding criteria for judging other faculty members. Perhaps we should institute something like the number of Woodrow Wilson Scholarships, Danforth Foundation Grants or Rhodes Scholars won by his students. I wonder what the results would be using this as a basis?

Bear in mind the coaches' success rests considerably on talent, talent that he, his staff and sometimes enthusiastic alumni must recruit under very stringent rules. I know for I've recruited and I also sat for five years as a member of the NCAA Council and Executive Committee that establishes the rules.

In contrast to our coach the faculty member need not recruit one student and the only time he ever sees the Admission Officer or Dean is when he is trying to get his son or daughter in school. On such occasions he'll put great pressure on — something the coach dare not do.

Lastly and most important is the matter of personal conduct. Let a coach be picked up for drunk driving and it becomes front page news. Yet not so with the professor even when the charge is shoplifting! In the latter case we find one small inch and a half article buried on page eight of section B of the paper along with court notices and the obituary column.

As an administrator I've physically thrown out two characters (I could say students but that would be upgrading them) and no one even knew it except those who witnessed the act. Let this be done by a coach and all hell would break loose. The stadium would be picketed and the President would have a delegation camping in his office.

I'm sure by now you probably have gained the impression that I would not be in favor of a tenure rule since I believe it to be a hinderance rather than a help to us. In this respect you are partially correct. I might say the general public appears to be getting less enchanted with the tenure rule but for a different set of reasons.

As a profession we have in past years been criticized by faculty, Alums and yes some students for what they call unethical practices. I refer to contract jumping or the unilateral terminating of a long term contract by the coach in favor of a more lucrative offer.

Some years ago Richard Havel, a member I believe of this Association, did his doctoral study on "The Professional Status of Head Coaches of Athletics in Colleges and Universities." Since then a graduate student, William Krueger, conducted a study under my direction which had to do with a study of "Head Football Coaches Contracts in Colleges and Universities."

One of the important bits of information brought forth in each study had to do with tenure and faculty status. Dr. Havel's study indicated that 63% of all coaches surveyed indicated they considered faculty status highly desirable. However, of those interviewed only 37% actually had tenure.

Krueger in his study done some years later found that only 28% of the institutions surveyed gave faculty status to their head coaches which might be considered as a definite trend away from the practice.

Dr. Havel found 32% of the coaches had contracts for from 1 to 3 years and 27% from 4 to 6 years.

Krueger on the other hand found in his study that 42.5% of the coaches were on 1-3 years contract whereas those having 4-6 year contracts amounted to 25%.

If we think of Tenure as being binding on the institution then Krueger's study of coaching contracts is interesting since it points out of the schools surveyed:

Contracts binding on both parties	25%
Institution only	32%
On neither party	3%

Yearly contract, [illegible]	15%
Tenure	15%
No answer	10%

Likewise it was interesting that the salaries of Head Football Coaches as compared with full Professors' salaries:

Greater	35%
Equal to	25%
Less than	7.5%
According to Faculty rank	10%
No response	22%

Note that 60% of the coaches were getting salaries equal to or greater than full Professors.

I'd like to close with a prediction or two and perhaps one or two recommendations which you might carry back to your institutions.

As for the predictions:

1) Pro football with its high salaries and obviously no tenure is slowly but surely setting the pace for collegiate coaches.
2) That more and more we'll see straight contracts for 3-5 years being offered that will be binding on the institution. Higher salaries than faculty.

Now for the recommendations:

1) If we consider ourselves professional people, and we certainly are, then I think we should conduct ourselves in that manner. We should respect the contract, and if offered a better deal, should see that our institutional heads are consulted and that release is offered willingly.
2) That perhaps the principle of tenure can be justified in smaller institutions or institutions where the athletic program is what we might refer to as "low key." On the other hand those where the programs are of the high pressure type, salaries should be commensurate with the responsibilities in keeping with the program. Perhaps it could be likened to what we find in the NCAA — a University Division and a College Division.

Obviously, if such is to be achieved, it will be up to professional organizations such as this or the NCAA or its counterpart, the NAIA, to carry the torch.

In closing, I am going to put you in the role of students. You may recall I earlier stated I still teach a graduate class or two each year. These are made up of young men ready to go out into the field. I urge them to be original in their thinking and planning. I point out the world only recognizes he who is the first to do something. For example, the coaches we recognize as leaders in the game are those who have contributed something to the development of the game. Physical Education and Athletics need people with original ideas. These people are the ones who will be respected and remembered. They won't need tenure!

By way of example, let me try this on you. During your college days you will recall we learned that Christopher Columbus was the discoverer of the new world. He was the first man to come here. *Now* can any of you tell me who the *second* man was? If you think I am going back too far, let us use Lindbergh. He was the first to fly the Atlantic solo. Who was the second man? Gentlemen, this is in your generation; yet, I see no one can remember who he was. My point, gentlemen, is be original and your institution and yes, the world, will never forget you. You will have no need for tenure!!

Innovations in Athletic Facilities

Richard Theibert
Hofstra University

The following text was illustrated with 71 slides and has been edited to briefly explain concepts.

"School Physical Education Classes are under increasing attack by children who think them "A waste of time: and by many educators who advocate restructuring of the curriculum."[1] If the young users think the curriculum needs structuring, pray that they don't start thinking about facilities. Our present facilities radiate the thinking of bushy faced, bushy haired "radical — conservatives" — Circa 1840. That is two beard generations in the past.

It was just six years ago, President Gores of the Educational Facilities Laboratories said, *"You can be famous for building the last of the old or the first of the new."* Since then we've had a *lot* of "old" and we've also had some great "new." The concepts which have generated from the gentle needling of this venerable sage, or devil's advocate, are being heard, and are generating action.

Generalizations

A few generalizations should be listed prior to specific facility concepts.

1) P.E. facilities are still at the bottom of the educator's list when it's building time. This constitutes a tragedy as bankruptcy looks down our collective throats.
2) Sadly enough 99% of the institutions between the 2 coasts, face bankruptcy now or will in five years. I know from personal experience of two private institutions — one on each coast — flirting with bankruptcy. In each case the "intercollegiate dynasty" faced instant decimation, and they were partly decimated. The related areas — physical education, intramurals and recreation escaped unscathed. You can sell physical education, you can sell recreation, you can sell leisure, but you can best sell the whole man.
3) There are some excellent solutions available and they're in the facility area. Physical education people can lead.
4) "Ecology" and "Environment" are the *current popular national problems*, but the physical wrecks who populate this country are in such pathetic shape that at their present rate of ineptitude, they can stop worrying about ecology. We'll be a nation of pear shaped objects with training wheels on our shoes, geared toward an antiseptic hot-house environment. Don't let fitness be forgotten; tie it with fun.
5) You will never have a healthy anything with facilities and concepts based on a 3 month national program. We avoid the fact that activities cease for the vast majority of the people after Labor Day.
6) We hate to acknowledge that *our living and recreational facilities are better designed for hibernating bears than people.* Please note that I feel physical education for men must assume leadership for all people, at all ages, at all places.

What should you want from the new? You should want an "acre of June for every child, every day," (President Gores said that first). You should want a facility so perfect that bad weather cannot cancel a single class, a single contest or one hour of recreation. You should strive to winterize every inch of recreational space you have. Let's start "facility thinking" at the ground level. That means rehash the same old "ex-sick" idea of eight years ago that caused people to think many of us were "Bye-Bye Farm" candidates.

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[1] New York Times, October 19, 1970

Synthetic Surfaces

Carpets are synthetic surfaces and have been accepted since the first flying carpets went strafing in the middle east, several thousand decades prior to the jet.

Step Two —(Artificial Turf-Grass) was tougher to sell, but thanks to a series of happy blunders, it sold.

Let's quickly consider the surfaces.

1) *PolyTurf* — A Ribbon Turf like grass made of Polypropelene. You can see it in the Orange Bowl and at Idaho State.
2) *Tartan Turf* — You can see it in the Northern Big Ten Schools and at Tennessee. Made of nylon fiber, it has very thin blades, not ribbon.
3) *AstroTurf* — The Big Daddy of them all that gave its name so the public could erroneously apply it to all turfs. Nylon ribbon makes up the fibres. But all three avoid that muddy, bald-headed field and people can play in the rain; they no longer play in the mud.

If you still question the wisdom of the turfs, financially or any other way, ask pro-football about the field of the future. They're solvent and they make very few dollar bill mistakes. They have a related physical activity which is *not going bankrupt*.

Then there are the other surfaces; they may be sprayed or poured, or come in blankets or rolls. There is *no best*. Each one is a little better or a little worse, depending on the use and dollars.

They are Urethene or PVC products and they do have problems. Seams and texture can be a problem. Cleaning is not difficult but memory can be a problem. Softness (Durameter) — shouldn't be a problem but it can be. You must specify what you want.

These accepted products mean that a field, a surface, can go any place. Therefore — have your fundamental concepts in hand and start dreaming.

1) A flexible structure can adjust to the future.
2) One synthetic field is the equivalent of 8 earth fields.
3) A field and a building are one concept.

Don't let existing minority groups and their interests which may monopolize the press and suburbia's bible "Sports Illustrated," dictate sizes. *Don't* think in the following sizes,

1) Basketball court
2) Quartermile eliptical tract
3) Football field
4) Major league baseball

Think people, think numbers, but mostly *THINK PEOPLE*. Did you ever see a beautiful playground full of beautifully designed esthetic apparatus? Four children play on the equipment and 50 dig in the sand and play in the street. Design for the consumer. Interests change and imagination soars in the young.

Think flexible, young, imaginatively and think air rights.

Air Spaces

You know about the tennis courts in the sky at Portland State. That is a good solution. Use the air space areas. A school in New York is being built over a freeway. It will have flat deck areas. Place air shelters on the decks and double the space; open it to the public; design it for multiple use. Design it to be vandal proof.

Expand your thinking and place a field in the sky. Knoxville College is thinking this way, Miles College is thinking field in the sky and you should start thinking field in the sky.

Let's call it "joint occupancy." Play with that thought. Think of it in terms of dollars.

The air shelter as we've known it, has been temporary, due to a temporary fabric. This is simply a building held up by air. The life of the new fabric has been extended to 40 years. The air shelter can now remain temporary or seasonal, but it is best used as a permanent structure. Add cable and control the shape. The air shelter has been successful for enclosing pools, tennis courts, greenhouses, family homes and can even cover a town.

The Buffalo Dome design by Birdair had a diameter of 875 feet. It had an inner bubble liner with lights suspended from cables overhead. The design was a major step toward acceptance. The air shelter achieved maturity in the U.S. Pavillion (300' x 600'), in Osaka, Japan. The engineer was *David Geiger*. Note that name and the architects was *Davis and Brody*.

Cables were hung under the fabric eliminating friction and reducing wear. Earth sculpture was imaginatively utilized in a Berm technique, and the price was exciting.

Basic costs in Japan were:
$3.00 per sq. ft. for fabric,
$1.00 per foot for cable, and,
$.50 per sq. ft. for the tension ring.
Total $4.50 sq. ft.

It is felt that a safe principle is that *economy increases as the span increases*. The fabric in Osaka has a 10 year life span and the replacement will be essentially permanent, 40 years. The goal is to reduce costs to $2.20 per sq. foot. What does it accomplish? It saves money if *roof weight equals cost*. If you wish to discuss details on this theory, contact David Geiger at Columbia University.

"Flexibility is essential." You are familiar with the air structure but not everyone can use an air shelter, due to rigid 1860 zoning codes, or cold or heat. Therefore, we would like to improve on the concept. This means the same cost per square foot and the same strength minus the air "only" support, and most important, still maintain the ability to span large areas.

If air and fabric were eliminated and the foam and cable concepts were utilized, you would come up with Graceland College's field house. John Shaver was the architect for this field house at Graceland College in Iowa and it's basically a foam building, foam on foamboard. The next step within this concept is to gunite foam on a cable structure.

Combining Concepts

If you combine the architect, John Shaver, and the Goodyear Research and Development with an Educational Facilities Laboratories Grant, a little messing around and a few Eurethene tests, you have the LaVerne College project. It covers 9 acres of ground which includes a student union, recreation, leisure, physical education, fine arts, continuous education, recreation, and a leisure mall; all done with the preceding ideas.

Always remember that physical education and recreation are part of living. *Stop trying to isolate them.*

Combine the cable and fabric ideas, leave the air pressure out and you have low cost structures. The goal is again the $2.50 to $5.00 range. One example of this is the new permanent stadium structure for Cuttington College in Africa by

Bob Browne of Memphis. There are many other cable structures to be erected, which are new on the drawing boards. If the fabric should show wear — spray it with Hypalon, Eurethene or Neoprene. This should give it new life, another ten years; or add a "Tedlar" film.

As you may realize, we are now playing with low cost structures that are practical and available. We're also exploring the imaginative world.

How about Oragami? This is imagination and creativity at its best. Why not take the principle of "Oragami," paper, and add strength. Fold it correctly and build a bridge, a paper bridge. Lev Zetlin did this and you have undoubtedly seen the results in magazine ads.

Is it relevant? It's dollar bill relevant. The paper was Lev Zetlin's concept. There are also paper houses with a 20 year life span, and they are on the market. Think the Zetlin way about your facilities. Dreams cut costs.

Then, of course, there's the permanent structure, conservative thinking gone wild. Let's dwell on Dr. Zetlin for a moment. Think in terms of Oragami Cables covered with a steel skin that has structural strength. Think in terms of large span bridge space and using a skin cover. You can cover the entire campus. May I suggest that you write Dr. Zetlin for his publication. It's the clear span hangar bible for the 747 and the SST (maybe). The maybe is a late senatorial addition.

Idaho State has a conventional structure which cost 2.8 million, covers a football stadium and may be the best facility on a campus in the United States today. Go see it.

Conventional cement by Mr. Harrington in Pittsburgh is also an interesting new scheme. Mr. Harrington is working on a concrete air shell system that will build 800' spans. The interest is again cost.

Now that you have played with several concepts, it may be time to combine types of structure. There is no law to prevent this.

Don't outlaw turnkey operations. Think in terms of modules delivered to the sight completely finished. Utilize showers, classrooms, lockerooms and offices. Place them around your clear span where you need them. Don't be locked into obsolescence.

Joint Occupancy

"There is a major crisis in school building across the country. High construction costs, difficult and expensive credit, and even the loss of revenue when school sites are removed from the tax rolls.

"In response, ingenious school administrators are exploring some interesting new ways of financing school construction.[2]

"New York City will get 23 new schools during the next five years, all of them paid for in full by revenue from commercial buildings built above schools.[3]

"The notion of joint occupancy is not new." [4] Boston's famed Fanueil Hall was built in 1761—designed for public meetings upstairs and butchers downstairs.

"Today, few office or apartment buildings are constructed without commercial space built into them — combinations of housing, motels, office space, stores and recreation facilities are springing up all over the country." [5]

It's this type of thinking you should explore. Make physical education a part of life not a compulsory hateful half hour. Think in terms of building it into everyone's life; student unions, dormitories, community business men's clubs, and apartments.

Break the thought mold. The campus community is dying due to lack of imagination and ingenuity. Lead the way back through healthy outlets for all people.

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[2] Evans Clinchy, A report from Educational Facilities Laboratories, "Joint Occupancy: Profiles of Significant Schools." P. 3 (Introduction)

[3] Ibid. p. 3

[4] Ibid. p. 3

[5] Ibid. p. 3

HISTORY OF SPORT

Dr. James Naismith – The Man

Henry Shenk
University of Kansas

Stories and Anecdotes About the Man Who Gave Basketball to the World

The little town of Almonte, Ontario, Canada was destined to give to the physical education profession two of its greatest leaders.[1] The one, James Naismith, was born November 6, 1861. He gave basketball to the world – one of the few instances where a man has deliberately set out to invent a new game and was successful. The magnificent gymnasia, field houses, and basketball courts to be found in every civilized country in the world are fitting monuments to Naismith and his game.

The other leader, R. Taite McKenzie, was born in Almonte on May 26, 1867, more than six years after Naismith's birth. McKenzie not only was a leading physical educator, orthopedist, physician and educator whose book, *Exercise in Education and Medicine* is a collector's item but he was also one of the world's great sculptors, who specialized in sculpturing athletes in action.

Naismith and McKenzie had many things in common besides having been born and growing to manhood in the same Canadian town. They were each of Scotch ancestry; they each lost their parents at an early age; each was a Presbyterian; each attended and was graduated from McGill University, where McKenzie succeeded Naismith as Director of "Gymnasium"; each became an M.D.; each was a fine athlete and leading physical educator; each made a significant and lasting contribution to the life and culture of the world.

Naismith had a childhood filled with grief and frustration. Three days before his ninth birthday, his father died. On his birthday he lost his mother. After the death of his parents he went to live with his maternal grandmother and an unmarried uncle, Peter Young. After about three years his grandmother died and Jim, his sister and brother were reared by the uncle.

Jim started his education in high school while working in lumber camps in the winter and helping his uncle on the farm in the summer. Then he felt that he should help his uncle more so he dropped out of high school and worked. After two years at the insistence of his uncle, he decided to go back to high school so that he might finish up and go to college. He skipped a grade, took the Latin and Greek examinations required for college entrance and, in 1884 entered McGill University.

His work on the farm and lumber camps had given young Jim a strong body. He was attracted to athletics and became a member of the rugby football team. He played rugby for three years. He also played soccer and LaCrosse. At the same time, he had certain ideas on the way a man ought to live his life. And then an incident occurred which created the focus of his entire career.

> One day during football practice at McGill, something went wrong, and the guard next to Naismith, who had gained respect for Jim's ideals, let loose a stream of profanity. Suddenly the player stopped and exclaimed, "Excuse me, Jim I'm sorry." Naismith suddenly realized that here was the way to connect the two, clean living through athletics.[2]

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[1] Fred Leonard and George Affleck, *The History of Physical Education* (Philadelphia: Lea and Febiger, 1947), pp. 465-476.

With these ideas in the back of his mind, Naismith was graduated from McGill in 1887 and was ordained a minister in the Presbyterian church. He stayed at McGill three years after graduation and preached in a small local church. On one occasion in a bruising game of football on Saturday, he received two very black eyes and presented a shocking appearance to his congregation when he appeared in the pulpit the next day.

Still imbued with the idea that he could develop clean living through sport, in 1890 Naismith entered what was then known as the School for Christian Workers in Springfield, Massachusetts. Here he also taught Physical Education to a class of prospective Y.M.C.A. secretaries. The story of how Naismith, after promptings from Dr. Luther Gulick, then head of the Physical Training Department of the college, invented the game of basketball, has been often repeated. But few know that we might be playing box-ball today, if the janitor, whom Naismith had dispatched to find two boxes, had been able to find them instead of coming back with two peach baskets and wondering if they would do. Naismith accepted them reluctantly and so we have been playing basketball instead of box-ball ever since.

The height of the baskets, too, was determined more or less by chance. The running track, which circled the college gym, was approximately 10 feet in height and that is where Naismith hung the first baskets, so that is the height they have remained ever since. He had considered setting the baskets on the floor at either end of the gym, but then he reasoned that a guard could sit on the basket and thus effectively prevent all scoring!

Graduates of Springfield College took Naismith's game of basketball with them to all parts of the country. It caught on immediately but was for a time considered something of a sissy game. Within five years time the girls were playing the game on an intercollegiate level. From Naismith's scrapbook comes this interesting item:

> The first intercollegiate basketball game between two women's teams was held between Stanford and California in 1896. Only women were allowed as spectators. The participants wore middies, bloomers and long black hose.
>
> Midway in the first half, one of the goals came down. A male janitor came in to fix it. The California girls ran for cover but the brazen Stanford hussies strutted about the court while the janitor was putting the goal up.

At Springfield, Naismith was credited not only with developing the game of basketball, but also with a lesser known achievement of inventing the first head gear for football. It came about in this manner.

He was the regular center on Amos Alonzo Stagg's "Stubby Christians," the Springfield football team organized in the fall of 1890 from the 57 students then in attendance at the college.[3] Stagg was the one player who had played American football but Naismith and another student had played rugby in Canada. The entire squad had only fifteen players and usually the eleven starters had to play the entire game. The name "Stubby Christians" was the admiring appellation given the Springfield team by New York sports writers after a game with Yale in Madison Square Garden in the fall of 1890. Yale was a powerhouse in Eastern football circles and the ferocious battle that Stagg's men waged, as Springfield outplayed Yale in the first half, won the hearts of the Eastern writers.

Naismith played center on the team. On one occasion, years later, he told his class about how he came to develop the head gear. As a center his head was getting sore and he was beginning to develop a cauliflower ear. In order to protect his head and ears, he took an old rugby football and cut it in two. He pulled one end of the ball over his head and ears and tied the two flaps under his chin.

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[2] Jack G. Hammig, *A Historical Sketch of Doctor James Naismith*, Unpublished M.A. Thesis, University of Kansas, 1962, p. 2.

[3] William H. Ball, "The Stubby Christians," *The Springfield College Bulletin*, XLIV (May, 1970), 13.

When young Naismith appeared on the practice field in this contraption, Stagg snorted, "What are you going to do, butt like a goat?" Naismith's reply has been lost. However, a picture of Naismith wearing this first head gear is to be found in the collection of Mr. Duke D'Ambra, a Lawrence photographer. Helmets have been an important part of the protective equipment of football for years and unless someone can successfully refute the claim, Naismith must be given credit for inventing the football helmet as well as the game of basketball.

Following four years at Springfield, Naismith became Physical Training Director of the Y.M.C.A. in Denver, Colorado in 1895. While working there in the "Y," he attended Gross Medical College. He was awarded the Degree of Doctor of Medicine in 1898.

In that same year, Chancellor Snow of the University of Kansas was looking for someone to head up the Physical Education program and also to lead prayer in chapel. Chapel was a daily occurrence and attendance was required. Snow contacted Amos Alonzo Stagg who recommended his good friend Jim Naismith. His ministerial background made leading prayer easy, but Naismith's main interests lay in physical education and athletics for it was in these areas where he hoped to be of real service to young men. His first appointment was as "associated" professor. He was advanced to full professor in 1907. He remained Chairman of the Department of Physical Education and Athletics until Dr. Forrest C. Allen, the famed "Phog" Allen of great basketball tradition at Kansas, replaced him in 1920. Naismith continued as a popular professor until his retirement in 1937.

In 1907 while a student at K.U., Allen had been employed by nearby Baker University, as Basketball Coach. When Allen told Naismith of his new job, the latter remonstrated, "Forrest, you don't *coach* basketball, you just *play* it!" It wasn't until years later when Allen and his Kansas teams became famous and Allen was President of the Basketball Coaches Association of America that Naismith conceded that maybe Allen could coach the game.

His former students tell many stories of Naismith's teaching. One of his duties was to teach a required class of hygiene once a week to Freshmen men. On this particular occasion in the Spring of 1925, the class was being held in a second floor classroom in old Robinson Gym. The day was warm and the 60 freshmen crowded into the room were being given a lesson on venereal disease. The room was even warmer because the shades over the windows, which were the only source of ventilation had to be drawn to darken the room to show a series of slides. These slides had been developed by the Army for use in their social hygiene program in World War I. The slides were horrible showing the most advanced cases of syphilis and designed, no doubt, to scare the recruits of 1917 so badly that they would take no chances.

As the lecture went on, the air became hotter and muggier. Suddenly there was a thump! A boy had fainted. Naismith called out "let him lay," and went ahead with the lecture. Then there was another thump. Another had fainted. Two or three more passed out during the period, and were allowed to stay on the floor. Naismith explained that fainting was nature's way of getting the blood back to a person's head by getting the head as low or lower than the heart. In a short time each student recovered and sheepishly regained his chair. The class learned two lessons that day.

On another occasion Doc was teaching a tumbling class. Students were diving over a horse onto a pile of mats. A football player with little tumbling experience asked, "Doc, how do I land?" Doc's reply was "Gravity will take care of that." No one laughed harder than Naismith when the student hit on his head and got up ruefully rubbing his neck.

Doc always managed to keep the class interesting, no matter what the subject. Toward the end of the semester in his Kinesiology class he announced that we would have a picnic at the next class period. One of the class members, who lived on a farm at the edge of town, provided some baked chickens for the occasion. All class members were served a generous piece of chicken. The catch was that each person receiving a piece of chicken had to identify the major muscles and their origin, insertion and blood supply before eating his piece of chicken. Many class members have never liked chicken as well since that affair.

Being an M.D., Doc was always intrigued with research on athletes. One time he became interested in finding the effects of drinking alcoholic beverages upon athletic performance. However, he knew that in Carrie Nation's Dry Kansas, there would be trouble if students were used as subjects for such an experiment. He decided to be the subject himself and let someone else record his performance after imbibing various amounts of alcohol. He developed a target of concentric rings of metal applied on wood with a "bull's-eye" in the middle and wired it up with electricity. The idea was that he would lunge at the target with a fencing foil a certain number of times and a light would flash each time he succeeded in scoring a bull's-eye. The performance was to be repeated several times after the consumption of increasing amounts of alcohol before each trial.

History does not record the results of this noble experiment but there is no doubt that there would be many volunteers from the present student body to act as subjects were they given the opportunity.

Along the same lines, Doc served as team physician and often told the story of carrying a bottle of brandy in his medical kit for medicinal purposes. He discovered that whenever his medical kit was out of his sight for a while, the level of the contents of the brandy bottle would be suspiciously lower. He solved the problem by labeling the brandy "Spiritus Frumentum." Since the tipplers' ability in Latin did not match their thirst, his brandy was undisturbed after that.

Naismith also gave the physical examinations to all entering freshmen. Influenced no doubt by Hitchcock and Sargent he used a complicated system to chart each person's anthropometrical measurements. Each male freshman was measured from head to toe, forwards and backwards and the measurements plotted on a chart. Not only should a person be well-developed but he should be symmetrical in build. Since symmetry was a goal, if one arm or one leg was larger in circumference than the other, a student was advised to spend long hours with pulley weights, the nautical wheel, rowing machines, and other devices designed to increase the size of the part in question. Today we recognize that most people have one side of the body larger than the other but this was considered a grave defect at that time.

One of the results of the examinations was the selection of the most perfectly proportioned man out of each year's freshman class. Naismith contended that since a good big man was always better than a good little man, his 100% man physically should be about 6'1" tall, weigh approximately 190 lbs., be perfectly symmetrical and possess fine muscular development. While seldom did a freshman man meet Doc's exact specification, he always selected the most perfect physical specimen from each new class. The campus newspaper dubbed this individual, "the answer to a maiden's prayer" and he became something of a campus celebrity.

One of the stories Doc liked to tell with a chuckle was about the miraculous football prospect he discovered while giving the physical examinations in the fall of 1899. His "find" was a large, raw-boned, green, country boy with huge hands and feet. He looked like a prime prospect to Naismith, who told Fielding H. "Hurry Up" Yost, the Kansas Coach who later went to Michigan, that he thought the young man might, with practice, shape up into a pretty good football player. Yost rather dubiously agreed to let the young man, whose name was Krebs, try out for the team. The boy's progress was unbelievable. Within three weeks he was on the first team. Each game he got better. By the time of the Nebraska game late in the season he almost single-handedly whipped the Cornhuskers. After the all-victorious season was over, Krebs disappeared. It wasn't until years later that a story leaked out about Naismith's "find." According to the story Krebs had been an All-American player at an Eastern College who was induced by Yost to come to

Kansas and help him out for the season. Naismith's eyes twinkled when he recalled his ability to judge football players.

Doc not only brought basketball to Kansas but also LaCrosse and Fencing. He taught gymnastics, track, boxing, soccer, tumbling, and such gymnastic exercises as wands, dumbbells and Indian Club swinging in addition to his many other duties.

As the years passed, basketball changed and developed and Naismith voiced his opinion of some of the changes. For instance, he always felt that the "stall" did not belong in basketball. When the University of Missouri stalled for eight minutes in a game against the University of Kansas, Doc insisted that it was against all rules of good sportsmanship. One of his suggested solutions was to let either team shoot at either basket thus spreading the players all over the floor. This was too revolutionary for the rule makers who instead introduced the center line which had to be crossed in 10 seconds.

Largely through the efforts of Phog Allen, who was first President of the National Basketball Coaches Association, basketball was included for the first time in the 1936 Olympic games in Berlin. Dr. Allen also sponsored a campaign to raise money to send Dr. Naismith and his wife to Berlin for the games. Each high school and college in America was asked to send one penny from each admission to one basketball game to provide the expense money. Not only was the response enough to pay for the Naismiths' trip, but enough money was left over to pay off the mortgage on their home.

Unfortunately Mrs. Naismith suffered a heart attack on the Sunday before Dr. Naismith was scheduled to leave. The Doctors assured Dr. Naismith that his wife would be all right but could not make the trip. He left the following Tuesday and was received with great respect and honor in Berlin. It was entirely fitting that the man who had invented basketball should be present when it was first played in the Olympics. It was while at the Olympics and later when visiting many of the major cities in Europe that Dr. Naismith became aware of the tremendous impact that his game had made on the world.

Naismith was physically a strong, and robust man whose sturdiness showed the effects of his hard work in the lumber camps and on the farm in his early days in Canada as well as his athletic participation. He was five feet ten inches tall and stocky. He'd fit in to the scene today for he always wore a mustache. He had no middle initial but some writers persisted in inserting an A in his name. When asked what it stood for Doc replied, "anonymous."

In his teaching, Doc was sometimes not as scientific as he might have been but he was always stimulating and challenging. He imbued his students with a love of physical education and athletics. He in turn was beloved by all of his students. Not only was he popular with the students but he was highly respected by his colleagues on the University faculty.

Naismith was a religious man, a Sunday School Superintendent, and an Elder in the Presbyterian Church in Lawrence, which he attended regularly. One person who knew Naismith well said he had never seen Naismith with a basketball in his hands but had often seen him holding a Bible.

He was never interested in amassing a fortune or making large sums of money by endorsing products in advertisements, although he did allow one sporting goods company to sell a basketball bearing his name. Typical of his character was his remark upon learning of the contributions to his Olympic trip, "Do not be afraid to serve humanity and wait for your reward."

James Naismith was an inventor, author, educator, innovator, athlete and Christian gentleman. He was an ordained minister and a physician. He gave up both of these latter professions because he felt he could be of greater service to young men through physical education and athletics than through either medicine or theology. When one thinks of the millions of young men playing his game of basketball, his life time goal of "clean living through sport" would seem to have been realized.

The Princeton Invitation Meet – Aristocrat of International Track and Field 1934-1940

John Lucas
Pennsylvania State University

The sixth competition between Oxford-Cambridge and Princeton-Cornell took place in Palmer Stadium, Princeton, New Jersey, on July 15, 1933. Six thousand spectators saw "the perfect running machine," Jack Lovelock, defeat Princeton's W. R. Bonthron, 4:07.6 to 4:08.7 — a world record. "Civilization's all right," chortled *The Literary Digest*. "Humanity going down-hill? . . . The croakers are all wrong. Youth is sound at the core." [1] The Oxford University Medical student's seven yard victory over the brilliant Bill Bonthron was an historic sports occasion, a symbol of the pacific relations between the ancient Anglo-American universities, and a revelation to meet director, Asa Bushnell, that similar confrontations between many of the world's greatest runners might be a smashing success for the sport and a financial boon to the university athletic deparment.* Mr. Bushnell, Princeton's brilliant sports organizer and Graduate Manager of Athletics, began work almost immediately for a 1934 Princeton Invitation Meet.

Jesse Abramson, one of the nation's most knowledgeable and responsible sporting journalists, called the 1934 games "possibly the greatest of the seven-year series." Bushnell and veteran Princeton coach, Matty Geis had worked hard in gathering the cream of America's track talent for a streamlined, five-event, fifty-minute program. The colorful and important Princeton Alumni reunion and parade, Commencement exercises plus the traditional Yale-Princeton baseball game had taken place earlier this weekend of June the fifteenth. The Palmer Stadium track, built in 1914, was the firmest and fastest surface in the East. The late afternoon weather was ideal for the athletes and the record 25,000 spectators. Johnny Follows beat Joe McClusky in the two-mile event, both men timed in 9:28.9. Ray Sears and Joe Mangan followed closely. Olympic gold-medal winner, Ivan Fuqua won a fast quarter-mile (47.8) over Bob Kane, with Timothy Ring, Harry Hoffman, and Jim Elliot completing the field.

The "880" was a classic with Benjamin B. Eastman racing quarters of 54.0 and 55.8 for a world record 1:49.8 — Chuck Hornbostel under the old mark with 1:50.7. Bill Paterson and Milton Sandler ran personal bests under 1:53. The pole vault saw Wirt Thompson and Keith Brown clear 14 feet; Alex McWilliams, Oscar Sutermeister and Barney Berlinger settled for less. At 5:50 p.m. the three greatest milers in America took their marks. Arthur Daley of *The New York Times* noted that the huge and festive crowd had "transformed the drab concrete stands into a huge splash of color." [2] Bill Bonthron was the crowd favorite with Glenn Cunningham setting the pace and Gene Venske in there to keep them honest. A pedestrian first half of 2:05.8 changed abruptly as the barrel-chested Kansan, Cunningham, charged through a 61.8 third quarter and powered his way through the final lap in 59.1. His time of 4:06.7 dwarfed Lovelock's 4:07.6. Twice within a few minutes, ear splitting applause had greeted two world record performances. The Princeton Invitation track meet had proved itself as a meeting of champions — a harbinger of things to come.

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* Princeton's Depression-born decision prohibiting the athletic department from soliciting donations from track alumni placed in jeopardy the 1934 Princeton-Cornell vs. Oxford-Cambridge meet, to be held in England.

[1] "New Mile Record — Civilization's All Right." *The Literary Digest*, CXVI (July 29, 1933), 26.

[2] Arthur Daley, "Cunningham and Eastman Break World's Records . . . ," *New York Times*, June 17, 1934, sec. III, p. 1.

In very early spring of 1935, Matty Geis made a roundtrip ocean voyage to England with eighteen hours in London, to prove emphatically to Jack Lovelock that he was really wanted as a competitor in the second annual meet. Lovelock's medical studies at Oxford were most demanding. Actually, the 1934 Meet was set up as a one-shot affair; "the idea of a series germinated in a conversation which I had with Lovelock in a London pub during the evening following the 1934 Oxford-Cambridge vs. Princeton-Cornell competition at White City." [3]

A massive crowd of 40,000, a blue sky, a fierce sun, and a lightning-like track greeted the elite performers. The great Lovelock was on hand — but not till the last event. Keith Brown and Bill Graber both vaulted 14 feet with Graber winning the jump-off at 14'3". Ray Sears defeated Joe McClusky, Harold Manning, and Don Lash in a 9:16.3 two mile — the Dane, Henry Nielson, dropping out after five laps. Five brilliant quarter-milers, Eddie O'Brien (47.3), Glenn Hardin, Jimmie LuValle, Ivan Fuqua, and Bob Kane finished in that order. With clock-like precision, the 120 high hurdles went off at 5:35 P.M. Five "greats" burst across the finish line in very close order; Sam Allen (14.3) winning over Al Moreau, Percy Beard, Johnny Morriss, and John Collier. Minutes later, "Chuck" Hornbostel won the classic half-mile in 1:52.7, and six of the world's greatest milers prepared themselves for their ordeal. An expectant hush fell over the packed stadium. Glenn Dawson bolted to the front briefly but gave way to the world record holder, Cunningham, the quarter completed in a slow 64.9. Lovelock, Bill Bonthron, Gene Venske, and Joe Mangan padded silently behind. Cunningham powered the second quarter in 60.8, but was unable to shake the 133 pound, black-garbed New Zealander. Through the third quarter the duo moved away from the field. "Lovelock pursued Cunningham like the Grim Reaper. Coming to the last turn Cunningham was done." [4] The Kewi glided through the yarn in 4:11.2, Bonthron's furious kick catching the tired Cunningham for second place (4:12.4). There were no records — just track and field at its very best.

Strong opposition against a 1936 meet was voiced by some Princeton alumni and echoed by President Harold W. Dodds. Charges of commercial exploitation and the obvious invasion of thousands of outsiders into town during an essentially private family holiday celebration prompted Dodds to ask the Council on Athletics to discontinue the series. The objection was withdrawn when Asa Bushnell proposed the daring plan that the 1936 meet be free of charge. It passed; all seats were reserved and obtainable only through mail application — Princetonians receiving preferential treatment. It was a bold coup and had it not been raining heavily on Saturday, June 13, 1936, the 52,000 seats might all have been filled. As it turned out, the select field in the seven events lured 30,000 enthusiasts into Palmer Stadium. Strong winds, a steady rain and ankle-deep mud seemed to preclude top performances. The spectators were rewarded with an outstanding track meet. Cornelius Johnson leaped 6'8" in the rain beating America's premier high jumpers, Ed Burke, George Spitz, Al Threadgill, Walter Marty, and Harold Osborn. The great Olympian, Glenn Hardin (52.3) ran a magnificent 400 meter hurdles, beating Bob Osgood, Jack Irwin, and J. H. Hucker. In what some consider one of the greatest distance accomplishments in track history, Don Lash slogged eight laps in under nine minutes —the second man ever to do so outdoors. His 8:58.3 was a world record as he ran away from Norm Bright, Joe McClusky, Ray Sears, and Frank Crowley.

Jim LuValle won the "440" in an excellent 47.1 — beating Hoffstetter and Eddie O'Brien among others. Forrest Towns refused to be discouraged by the weather and won the hurdles (14.6) over Sam Allen, Phil Good, and Al Moreau. A near blanket-finish in the "880" (1:55.3) saw Lou Burns defeat Hornbostel, Williamson, Bradley, and Wolff. The feature mile resulted in pedestrian time (4:13.4) but a photofinish between Gene Venske and Glenn Cunningham. The Pennsylvania stylist dogged Cunningham throughout and more than matched the Kansan's finishing sprint over the last 100 yards. The light-training ex-Princeton great, Bill Bonthron, was unable to hold off Bill Daley of Detroit. Bill Ray of Manhattan College finished fifth.

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[3] Asa Bushnell, New York City, letter, 26 February, 1970, to the writer.

[4] Jesse P. Abramson in *The New York Herald Tribune*, Sunday, June 16, 1935, sec. III, p. 1.

Jack Lovelock, Berlin Olympic Games winner and world record holder at the metric mile was returning home to New Zealand in the fall of 1936, after six years of studying medicine at Oxford University. He managed to stop off at Princeton University on his way west and race America's best in a very special mile in between the halves of the traditional Princeton-Williams football game. Some 40,000 fans greeted Lovelock, Cunningham, Don Lash, Glen Dawson, and youthful Archie San Romani. It turned out to be a kind of frosting on the 1936 Princeton games. All but Romani were Olympians or world record holders. Dawson broke fast, with Lash second, Lovelock, Cunningham and San Romani trailing. Lash dropped out with a severe muscle cramp, Dawson held to the quarter-mile post in 62 seconds. At the half-mile, Dawson Lovelock, and San Romani were in Indian file in 2:07.2, with Cunningham two yards back. Cunningham and San Romani were close at the three quarters in 3:12.2. Then it happened. Lovelock jumped into the picture in pursuit of San Romani, raced him even until sixty yards from the finish, but gave in to a 56.8 last lap, "perhaps the fastest ever run in a superfast race."[5] San Romani's 4:09.0 was the fourth-fastest mile ever run; Lovelock ran 4:10.1, Cunningham, 4:13.0. For the track enthusiast present at Palmer Stadium that day, the remainder of the football game was meaningless.

In 1937, for the first time, the Princeton Meet conflicted with the NCAA track Championships. An astonishing tug-of-war took place to get the Olympic Champion, John Woodruff, to run the Princeton half-mile. It never came off and 20,000 spectators saw the brilliant Elroy Robinson win the "880" in 1:51.6. Cornelius "Dutch" Warmerdam won the vault at 14 feet, Jack Donovan the 220 hurdles in 23.6, Floyd Lochner inaugurated a two-mile steeplechase with a 9:59.3 victory, Delmer Brown, out of Eastland, Texas, took the quarter in 48.0 (Denis Shore of South Africa was fourth in 48.7). Only a few yards separated Louis Zamperini, Howie Welch, and Ray Sears in a slow 9:28.2 two mile. It was Archie San Romani again in the mile — an astonishing 4:07.2 near deadheat with Don Lash — the second fastest mile up to that time. Lash was the hero of the race although San Romani was declared the winner. Lash followed Gene Venske, who had informed the officials and the runners that he was going out for a three-quarter-mile record bid. Maybe Lash didn't believe him, or didn't care. Venske ran his quarters in 58.6, 2:00.2, and 3:01.4, and Lash went with him. "Nice pace for a four-minute mile," quipped Arthur J. Daley, "but Venske wasn't running a mile." Lash eased off, allowing San Romani and the ubiquitous Glenn Cunningham to close on him.

> Lash tagged along, and there he was with them in the homestretch when all three made a chariot-race dash, leaving a crowd of 20,000 wondering what Lash might have done with better distribution of his energy.[6]

Cunningham was third with a 4:07.4 clocking, and Luigi Becalli of Italy, the 1932-Olympic Champion, in 4:09.6. The aristocrat of track meets continued to live up to its name.

The organizational genius of Asa Bushnell and world-wide notoriety had made the meet the most prestigious invitational affair in the world. It kept a small group of Princetonians, ever resentful of the rag-tag mobs that annually infected their Commencement and Alumni reunion exercises, from terminating the track tea party. In 1938, the hyper-fast Palmer Stadium cinders helped Archie Williams to a 47.5 quarter over Harold Cagle, Wesley Wallace, Doug Raymond, and Phil Good. The popular pole vault saw sports immortals, Earle Meadows and Cornie Warmerdam climb 14'6"; the clever and talented Charlie Beetham won the half in 1:52.6, and veteran Ray Sears in a 9:16.4 distance race. At 5:30 P.M., the milers reacted to the pistol of John J. MacHugh, America's greatest track starter. The magnificent Glenn Cunningham powered his way through a great 4:07.2 race — despite a collision with San Romani (4:10.4) on the last straight-away. Josef Mostert of Belgium was third in 4:11.6, Blaine Rideout (4:12.4) and Peter B. Bradley (4:13.9) also finished well.

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[5] Abramson, *New York Herald Tribune*, Sunday, October 4, 1936, sec. III, p. 1.

[6] Arthur J. Daley, "The Mile Record: Past, Present and Future." *Princeton Athletic News*, VI (June 18, 1938), 35.

At precisely 6:25 p.m., the indefatigable Cunningham was bristling — ready for the three-quarter mile run. In a classic quality race with a surprise ending, Wayne (Twin) Rideout held off the Kansas veteran by four yards and five tenths of a second, breaking the existing world record with a 3:00.3; the great Gene Venske turned in a 3:01.4, Ralph Schwarzkopf ran 3:01.9, Ray Mahannah, 3:02.9, and schoolboy wonder, Leslie MacMitchell, 3:04.8.

Thunderhead clouds had passed, the threat of rain was gone, and the unique Palmer Stadium Cinders were thoroughly prepared for the 1939 competitors and 28,000 spectators. After all, Sydney Wooderson was coming to town! The little black-shirted Englishman had broken world marks at 800 meters, 880 yards, 1320 yards, and the mile. Asa Bushnell, now Commissioner of the Eastern College Athletic Conference and his former assistant, Ken Fairman, brought together the nation's best to meet the challenge. Right away, Wayne Rideout beat back Venske, MacMitchell, and Maryland newcomer, Jim Kehoe, in a tight 3:02.8 three-lap race. Minutes later, schoolboy, Johnny Quigley, beat back Olympic Champion, Archie Williams, in a photo-finish 47.6 quarter. Bill Fritz, Jimmie Herbert, and Howie Cagle followed closely. Charlie Beetham (1:52.0) beat four of the country's best in John Borican, Campbell Kane, Ed Burrowes, and Howie Borck. The puzzlingly-slow Princeton two mile races (except in 1936) followed suit with a 9:21.2 victory by Tommy Deckard over Joe McClusky and George DeGeorge.

Hollywood could not have conceived a wilder mile than this pre-war affair. Sydney Wooderson jumped into the lead and ambled through a 64 second lap, killing all chances for a record race. The greatest sprint finisher on the European continent had elected a tactical race. The partisan crowd roared and the gay orange costumes of the celebrating alumni made vivid splashes of color in the white-shirted mass. Wooderson, with the guileless look of a schoolboy and tiny size four track shoes, led the Americans "Chuck" Fenske, Glenn Cunningham, Archie San Romani, and Blaine Rideout, through another slow quarter in 64 seconds. Fenske moved up to second and ran on Wooderson's outside shoulder. Cunningham and Rideout also ran tandem through the second and third laps. San Romani was last as Wooderson passed three-quarters of a mile in 3:14, preposterously slow in light of the 4:03 to 4:05 times discussed prior to the meet. The crowd watched expectantly as the five athletes, closely bunched, fled through the penultimate turn and a savage flat-out sprint for home began.

An incident occurred on the last turn that was to have international repercussions. Wooderson was still in front, with Blaine Rideout on his outside shoulder as they whirled into the last turn. Jesse Abramson, paragon of track sports' writers, commented that "Wooderson was not picking up the beat any, and to a trained eye it was apparent that he wasn't going to have any kick." [7] At the precise moment that Rideout was preparing his final kick, Fenske moved a stride closer in anticipation of passing both Rideout and the English invader. From the press box, the *New York Times* reporter, Arthur Daley, noticed Glenn Cunningham, freed from a pocket at last, begin a powerful and slightly longer sprint. His foot struck the curb; he stumbled and almost went down. "Glenn looked up and, lo! there was Wooderson doing the same thing."

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[7] Jesse Abramson in the *New York Herald Tribune*, Sunday, June 18, 1939, sec. III, p. 1.

The pressure and traffic made a reconstruction of that fraction of a moment difficult. Rideout, the Texas twin, crowded Wooderson. Wooderson put up his right arm to ward off contact. John Kieran, from his perch in the press box, was unable to tell whether Rideout actually brushed Wooderson or even if Wooderson's right hand touched the surging Texan.[8] It didn't seem to matter. Wooderson's left shoe touched the curb and he was thrown off stride. The crowd rose in amazement as Rideout forged past the fragile Englishman and into the lead. Wooderson, in his all-black uniform of the Blackheath Harriers, bounced back into stride, but he was finished. The whole field was on his heels when the incident occurred, and they all jumped into sprint action for the kill as the crowd went crazy with excitement. The Wisconsin alumnus, Chuck Fenske, launched his 142 pound frame beyond Wooderson, passed Rideout, and blasted the last hundred to finish off a 57 second last quarter. Fenske's crimson shirt broke the tape in 4:11.0, the courageous Cunningham was second in 4:11.6; San Romani, 4:11.8, Rideout, 4:12.0, and Sydney Wooderson, foot-racing idol of the British Empire, a badly beaten fifth and last in 4:13.[9]

The wire-services crackled for weeks over the incident. Recriminations, cries of "foul," denials and explanations, gave the Princeton Invitation Track Meet, already famous, a new dimension of international notoriety.

War clouds and an absolutely adamant distaste for the track meet on the part of certain influential Princetonians made the 1940 meet, the seventh of the series, also the last one. New director of the meet, Ken Fairman, although unable to lure foreign stars across the dangerous Atlantic, had put together a beautifully-balanced program. Veteran Princeton coach, Matty Geis, had labored hard to make his meet the best in the world; he predicted world-class performances and eye-lash victories in every single event. He was just about right. The seventy-five minute meet started off with brilliant 13.9 seconds American record hurdle performance by Fred Wolcott, inches ahead of Boyce Gatewood and Marsh Farmer. Minutes later the Canadian Olympian, Lee Orr, managed a two-foot win over teenager, Grover Klemmer in 46.8 — Warren Breidenbach, Charlie Belcher, Jimmie Herbert, and John Quigley, all running under 48 seconds.

Two midwesterners, Greg Rice and Don Lash, fought a bitter two mile race — the former winning, 9:02.4 to 9:04.8, with Wayne Rideout (9:10.4) and Forest Efan (9:15.0) close competitors. The University of Texas and Yale were loaded with hurdles. The 10,000 track enthusiasts were treated to a double American record in the 480 yard shuttle hurdles as the Texas team of Douglas, Pack, Baggett, and Gatewood held off Yale's Osborne, Murphy, Day, and Shields — 58.6 to 59.1. The new Nassau ace, Ed Burrowes, beat back Campbell Kane and Jim Kehoe in an American 800 meter record (1:49.2) and 1:49.8 half-mile. Kane was very close in 1:49.9, and Kehoe, 1:50.9. Anyone not paying close attention might have missed the 220 yard low hurdles as Fred Wolcott cracked two world's records held by Jesse Owens — 22.3 and 22.5 at 200 meters and 220 yards. The very last event in the meet and in the series was, of course, the mile. It was a dog fight. All six competitors were together with a quarter-mile to go. The enigmatic John Munski of Missouri, "Lonesome John" as he was called, bolted a 56.6 last quarter, a 4:11 mile, as he lead home a good field of Walter Mehl (4:11.7), Les MacMitchell (4:12), Lou Zamperini, Blaine Rideout, and Mason Chronister from the University of Maryland.

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[8] John Kieran, "Footprints at Princeton." *The New York Times*, Monday, June 19, 1939, sport page.

[9] A fuller version of the "bump heard 'round the world" may be found in John A. Lucas' "The Mile of the Century — 1939 Princeton Invitation Games." United States Track Coaches Association *Quarterly Review* (June, 1969), 11-16.

It had been a grand affair. "Here's one country boy that will always be grateful for having been invited to run at Princeton — the greatest track meet outside the Olympic Games," wrote John Morriss of Houston University[10]; "the Princeton Track Meet was beautifully done, beautifully done — a magnificent athletic affair," was Bob Kane's comment[11] and eloquent testimony to what must have been a sweet track meet, a jewel, an aristocrat among the historic family of important international sporting matches.

Research Methods and Techniques Applicable to the Study of International-Comparative Physical Education and Sports

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Although the terms international and comparative physical education are related they are by no means identical. The distinction is evidenced by the emphasis placed on the various aspects and facets of this discipline. In general, international education is concerned with intellectual, cultural and educational relationships among individuals and groups of two or more nations. It is a vigorous concept which stimulates individuals to share their ideals, ideas, opinions, philosophies, and practices through various means. Interchange of professional information might be stimulated by publications, visitations, or such personal contacts as correspondence or exchange of personnel.[1] The principal objective of the international approach is to obtain information about other peoples, their problems and their manner of solving these problems. In addition, the purpose is to share experiences and, in a sense, to develop an appreciation for and understanding of problems and concerns that affect other nations.[2]

Comparative physical education, on the other hand, is not so much concerned with satisfying individual curiosity as with the analysis of educational systems and problems. Such analyses are made in terms of cultural, socio-political and economic phenomena and aim at identifying both, similarities and differences and their underlying causes. Although national differences are defined and demonstrated, the comparative method does not purport to determine the superiority of one system, one philosophy or one methodical application. Due to overlapping interests of students or teachers, a widely different terminology is often employed to identify the areas of research or instruction. Adjectives such as international, comparative, developmental, fundamental, cultural, cross-cultural, poly-cultural and cosmo-cultural may be indicative of the variety of interests that exists among those who desire to extend their professional knowledge beyond national frontiers.[3]

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[10] John Morriss, 1935 high hurdle competitor; presently, head track coach, University of Houston, letter, January 20, 1969.

[11] Robert J. Kane, 1934 and 1935 quarter-mile competitor, Director of Athletics, Cornell University, letter, February 4, 1969.

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[1] Stewart E. Fraser and William W. Brickman, *A History of International and Comparative Education* (Glenview, Illinois: Scott, Foresman and Co., 1968), p. 1.

[2] Edmund J. King, *Comparative Studies and Educational Decision* (Indianapolis: Bobbs-Merrill Co., Inc., 1968), p. 51.

In an address to the members of this professional organization Nixon[4] presented a clear picture of principles, scope, processes, implications and status of comparative and international physical education in the United States. Inferences that might be made from this presentation are:

1) Comparative educational studies are to be undertaken by teams of specialists representing various related disciplines;
2) Comparative researchers in the area of physical education should be trained in one additional relevant basic academic discipline;
3) Textbooks for comparative physical education are scarce;
4) Most available literature in the area of international physical education are not true comparative studies but are products of personal (subjective) observation by untrained personnel (in terms of qualifications for comparative study) or descriptive studies;
5) The physical education profession in the United States lags behind various other disciplines in its scientific efforts in comparative research;
6) The physical education profession in the United States has very few qualified comparative researchers;
7) Research training for specialists in comparative physical education should be at the post doctoral level;
8) Young and less experienced investigators should be restricted to small topics or limited themes.

Very few physical education departments find themselves in such fortunate circumstances that they can pursue post doctoral studies with an inter-disciplinary team approach. Worse, as very few students and instructors are sufficiently prepared to deal effectively with the historical and linguistic aspects of international physical education, many graduate programs are severely handicapped in their offerings in this area. An opinion survey by Miller,[5] however, indicates that the enthusiasm and desire for information of an international nature continues to increase, despite the imperfection of our professional efforts in this area. The survey indicates also that there exists great variety in course titles, course contents, manner of organization and presentation. In many instances the research efforts will not surpass the descriptive stage. As previously indicated, without a proper foundation in history, a thorough understanding of systems and methods and a proficiency in one or more foreign languages, the field of enquiry will be limited considerably.[6, 7] In fact it may result in an almost total dependency on secondary and tertiary sources. Faced with these problems instructors of international physical education have devised various research methods to attain their objectives.

In the true sense of research in international physical education most methods employed must be regarded as incomplete. The following suggestions for research methods and techniques suffer from the same ailment and should, therefore, not be regarded as an attempt to prescribe a uniform method of imperfection.

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[3] Fraser and Brickman, op. cit., p. 484.

[4] John Nixon, "Comparative, International and Development Studies in Physical Education" in *PROCEEDINGS*, ed. by C. E. Mueller (Minneapolis: National College Physical Education Association for Men, 1969), pp. 114-123.

[5] Ben W. Miller, *Summary of Fact and Opinion Survey on Separate Courses and for Units in Comparative and/or International HPR and Sport as of 3/26/70*, Exhibit Number I (Washington: American Association for Health, Physical Education, and Recreation, 1970). (Mimeographed)

[6] Don Anthony, "Physical Education as an Aspect of Comparative Education" in *Gymnasium*, Vol. III, No. 2 (Summer 1966), p. 3.

[7] Vernon Mallinson, *An Introduction to the Study of Comparative Education* (London: Heinemann, 1961), p. 35.

As most instructors of international physical education are acquainted with research methods and the availability of source material, it would be redundant to discuss these. It will suffice, therefore, to present the basic structure of the research project. In the address of the project we may distinguish five phases which do not necessarily follow one another in a chronological sequence but which at times may overlap or run parallel.

In the *Preparatory* phase the groundwork for the study is laid. This consists mainly of bibliographical research which will produce a compilation of facts, names, addresses, etc.

After a selective process in which a body of coherent material has been composed, one proceeds to the *Gathering* phase. Here the researcher engages in the customary manner of gathering additional information and materials. Use is made also of the "shotgun" approach in which the researcher approaches selected personnel and agencies for information. As the researcher is still in the beginning stage of his project and generally unaware of the potential of his study, he will not yet be able to formulate requests for pertinent information. A general description of the purpose of his study accompanies his request for additional materials, sources and references. Although this approach may appear somewhat vague, it has the advantage of not placing an, as yet, unwarranted demand on the correspondent's time and energy.

During the *Selection* phase the researcher assembles his materials and enters in follow-up procedures with selected sources. Correspondence or personal interviews are conducted to gather pertinent, detailed and additional information. Visits to off-campus libraries, inter-library loan activities, interviews with foreign students, etc., are conducted to substantiate or refute compiled data.

Once the researcher has obtained the necessary information he enters in the *Composition* phase. Here he follows generally accepted procedures for writing up his findings.

The final stage or *Validating* phase is a crucial one as the researcher's study will be forwarded to accredited personnel in the country on which the study has been done for evaluation purposes.

Once the critique has been incorporated, the research project has been completed.

"Pok-Ta-Pok" – A Ceremonial Sport of the Hohokam Indians of Arizona?

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Sports and games have a unique and interesting tradition throughout central and southern Arizona that date back prior to the birth of Christ. The early settlers to this area concentrated their settlement primarily around the basins of the Salt and Gila Rivers. This remarkable Indian civilization has been given the name Hohokam (pronounced Ho - ho - kam, and is a modern Pima word meaning "that which has vanished!")

Although the research is far from complete, evidence indicates that the games and dances performed by the Hohokams developed from the Mayan culture of Middle America. In 1935, at the Hohokam site in Snaketown, a large elongated depression, flanked on its longer sides by raised mounds of earth, was excavated in an attempt to determine its original function. Haury stated, "it became apparent that the structure was analogous to the ball courts of Middle America. The size, the sloping sides, the three stones aligned on the long axis, and the wide end units seemed more than merely suggestive of a possible alliance."[1] Additional ball courts have been recorded in several parts of Arizona, including the Pueblo Grande ball court in Phoenix, substantiating earlier findings.

Before one attempts to describe the use of these courts, a brief review of the facts pertaining to the ball courts is necessary. Two types have been recognized in the Southwest, basically the Snaketown type and the Casa Grande type. These Hohokam courts, or so-called ball courts, shared certain fundamental characteristics: (1) an essentially curvilinear floor plans; (2) a center field with rounded ends whose prepared floor rises perceptibly at each end, and whose overall floor plan ranges from oval to flattened-oval; (3) a short, usually paved, passageway, or ramp leading away from the mid-point of each rounded end of the center field; and (4) mound or, in one case, masonry structure, which follows the longer, curved edges of the center field and tapers in width toward the end.[2]

Because of erosion, the original height of these mounds cannot be determined, but the range may have been from one foot to as much as nine or ten feet. The courts varied in size, but the Pueblo Grande court measured 40 by 80 feet.

Evidence indicated that the Mesoamerican courts of the Mayans contained stone rings on the side of the walls, where the opponents attempted to direct the ball through for a victory. But no stone rings have been found in association with Hohokam ball courts. According to Blom, this statement means relatively little since for the Maya area there is documentary evidence "that players were instructed to bring their instruments, rings, their gloves, and also their ball,"[3] indicating that the rings, in some cases at least, were portable, and possibly made of some perishable material. This fact is plausible as a majority of the Middle American courts are found without rings. If rings were used in a game by the Hohokam, Haury believes they were perishable for several reasons: first, no stone rings suggestive of a use in such a game have been found in the area, and second, stone rings were far too heavy to have been supported by the soil forming the walls of the court.[4] However, various "markers" in the form of stones, excavated cavities, and even post holes, located essentially along the longer axis of a court have been encountered. These markers appeared to show little consistency, the number ranging from zero to at least three. As with Mesoamerican ball courts, there was a trend toward north-south or west-east orientation of the Hohokam courts.

Much confusion exists as to the real purpose of the courts. Both Ferdon and Blom presented hypotheses that the courts were bound up with religion and religious ceremonies. Blom stated that "games were not begun until religious ceremonies had first been performed."[5] This would seem basis enough to infer a similar practice among the Hohokam. Ferdon goes into considerable detail explaining the possibility that the Papago Vikita ceremony performed on the ball courts was the main reason for their existence. Ferdon stated, "the Vikita was the most important ceremony performed by the Papago," and he continued, "the ceremony was either performed as a harvest festival or to keep the world in order."[6] Finally he stated that "considering the Hohokam court does not compare precisely with either the Mesoamerican ball court nor the Papago dance court, one is forced to admit that, on a generalized basis, it compares equally well with either one of these functionally known building complexes."[7]

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[1] Emil W. Haury, *Excavations at Snaketown, Material Culture* (Tucson, Arizona: University of Arizona Press, 1965), p. 38.

[2] Edwin N. Ferdon, Jr., "The Hohokam Ball Court . . . an Alternate View of Its Function," *The Kiva: Journal of the Arizona Archaeological and Historical Society* (Tucson, Arizona: University of Arizona, Vol. 33, No. 1, October 1967), p. 3.

[3] Frans Blom, "The Maya Ball Game, Pok-ta-pok," *Middle American Research Series* (New Orleans, Louisiana: Tulane University, No. 4, 1932), p. 513.

[4] Haury, op. cit., p. 48.

[5] Blom, op. cit., p. 498.

Since the research does not clarify the confusion on what the courts were really used for, it is reasonable to pursue the theory that the courts were used for various kinds of "ball" games.

The following court games have been observed or recorded.

Acaxee — a ball game encountered in northern Mexico made use of a rubber ball, a specially prepared court, the elements of heavy betting, a complex ceremonial connection, possible religious features, and the rule of not touching the ball with the hands. A point was scored when the ball touched the ground. No goals were used.

Sinaloa — in 1923, a party saw a game played at Mocorito, Sinaloa, in which a "long narrow field divided transversely was marked off in the plaza; there were four players on each side, the solid rubber ball, about three inches in diameter, was struck sometimes by the hip but usually by the bandanna-bound upper arm."

Yaqui — Capt. W. H. Stayton, USN, observed Yaquis "playing a game with a ball about twice the diameter of a baseball. The game consisted in throwing the ball from hip-to-hip."

Opata, Tarahumare — in 1765, these groups in north-central Mexico were playing a game similar to that played in Middle-American courts.

Pima — disbarment of a player if the ball is touched with the hands.[8]

Except for the documentary evidence just mentioned, most of the information relating to the type of game played in these courts has been hypothesized from recounts by Spanish explorers. The Mayan game is called Pok-ta-pok (translated from Mayan words to mean "to play ball on the ball court.") Excerpts from the description of the game are as follows:

> "It could be played by one, two or more on either side. When many persons played, the principal players stood in the narrow space . . . between the walls and by hitting the ball with their knees, thighs, or buttocks they sought to drive it through one of the stone rings (A) line drawn on the floor from ring to ring probably divided the field of the two parties.
>
> This seems to indicate that one party, X, must keep the ball on the move while it was on either side of the line, and strive to drive it into the field of the opposing party Y.
>
> The line running lengthwise through the center of the court as we frequently see it depicted in the codices, may have been a division referring to the stone ring, i.e., the party X defended the ring on one side as theirs, while they at the same time attacked the ring on the opposite side belonging to party Y.
>
> Guards stood at the broad ends . . . of the court to stop the ball from entering there.
>
> It is easy to understand the excitement of the spectators when the ball was driven through the stone ring. Especially so when one considers, first, that the ball could not be hit with hands or feet; secondly, that it was large

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[6] Ferdon, op. cit., p. 9.

[7] Ibid., p. 11.

[8] Arthur H. Schroeder, "Cultural Implications of Ball Courts in Arizona," *Southwestern Journal of Anthropology* (Albuquerque, New Mexico: University of New Mexico, Vol. 5, No. 1, Spring 1949), p. 35.

BALL COURTS IN ARIZONA

Table 1

Trait	Snaketown Type	Casa Grande Type
Shape	Modified "I"	Oval
Size (relative)	Large	Small
Orientation	East-west	North-south
Floor Markers	Three on long axis	Usually three
End Features	Large semi-circular unit	Small opening leading onto platforms or aprons
Floor	Prepared	Prepared
Walls	Sloping and plastered	Sloping and plastered
Association	Hohokam	Hohokam and Mogollon or blend
Location	Gila Basin and south tributaries, and Salt River valley	Same, plus middle Verde, north and east of Flagstaff, and south of the Gila into the Chiricahua range
Dates	Circa 700-1050 or 1100 AD	Circa 1050-1300 plus AD
Remarks	Only one excavated	

Table 2

Trait	Middle America	Snaketown Type
Shape	Capital "I"	Modified "I"
Floor	Flat, skirted by terrace	Depressed, no terrace
Markers	Occasional three on long axis	Three long axis
Rings	Absent	Absent
Orientation	Variable	East-west
Size (relative)	Small	Large

and heavy; and thirdly, that it was without doubt made of uneven material and most likely was not even perfectly round in shape." [9]

Haury stated, ,"that the Snaketown ball game resembled ancient Mexican contests and may have been more a battle than sport. Forbidden to throw or kick the rubbery ball — probably made from guayule, a desert bush — players tried to knock it through rings on the walls with hips, knees, or elbows. So rarely did a goal occur that the scorer could claim the clothing and jewelry of the spectators. Thus when a goal was scored, the contest ended; viewers took to their heels, pursued by friends of the victor." [10]

Although considerable agreement exists related to the earlier concepts of how Pok-ta-pok was played by the Mayan civilization in Mexico, considerable mystery still surrounds the ball courts of the Hohokam tribes in southern and central Arizona. Donald H. Hiser, archaeologist and director of the Pueblo Grande Museum advanced the theory that possibly the game may have changed as a result of the somewhat different structure of the Hohokam ball courts. Hizer theorized that the smaller entry ways may have served as goal areas, and because a smaller ball was used, the Hohokam kicked the ball, rather than using the hips, elbows, and knees to propel the ball.[11] Many smaller balls have been located in the Central Arizona region. Russell substantiated this theory by indicating that the Hohokam or Pimas conducted kicking-ball races. Russell stated, "Each contestant kicks one of these balls before him, doing it so skillfully that his progress is scarcely delayed; indeed, the Pimas declare they can run faster than without the balls. Perhaps the occurrence of the stone balls in the ruins gave rise to the idea that they possessed magic power to 'carry' the runner, for all things pertaining to the Hohokam have come to have more or less supernatural significance. Two youths will sometimes run long distances together, first one and then the other kicking the ball, so that it is almost constantly in the air." [12]

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[9] Blom, op. cit., pp. 497-498.

[10] Emil W. Haury, "The Hohokam, First Masters of the American Desert," *National Geographic* (Washington, D.C.: Vol. 131, No. 5, May 1970), pp. 678-679.

The balls were either shaped from stone contiguous to the area, or made from native mesquite, or paloverde wood. Both the stone and wooden balls were covered with lac, a sticky residue deposited on the creosote bushes. This residue was collected and melted into a sticky gum which was applied to the balls. The balls resembled a croquet ball in size.

Among some of the games now played by the Pima, there are one or two characteristics which might conceivably have persisted from earlier times. These are: the disbarment of a player if he touches the ball with his hands and the above mentioned coating of balls of wood or stone with creosote gum.

The mystery of these ball courts remains because archaeological evidence indicates the abandonment of the courts nearly 500 years ago. Possibly these games were the forerunner of modern-day soccer and football. Future research may uncover additional evidence related to the popularity of the ball in the development of games and sports.

Sport and the Making of American Higher Education: The Early Years, 1783-1875

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University of Massachusetts

The final quarter of the nineteenth century was the age in which higher education assumed a place of paramount importance in the scheme of American life. It was also the period in which sport as student pastime and public entertainment became an essential part of the collegiate scene. Historians of education who have given attention to the improvement in the status of higher education have been unanimous in the opinion that it was due to responsiveness of the institution to the demands of society.[1] However, in presenting support for the thesis, they have completely ignored the role of sport in the transformation of campus life and the relationship between the emergence of intercollegiate sport and the rise of higher education.[2] In view of the fact that sport was central to the vigorous extracurriculum and the visible university of the latter part of the nineteenth century, an assessment from the perspective of sport should be made of the transition years in higher education, 1783-1875.

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[11] Donald H. Hiser, private interview, Director, Pueblo Grande Museum, Phoenix, Arizona, December 21, 1970.

[12] Frank Russell, *The Pima Indians*, Twenty-sixth Annual Report, Bureau of American Ethnology, Washington, D.C., 1908 (Washington, D.C.: Bureau of American Ethnology, 1908), pp. 172-173.

Colonial colleges were few in number and small in enrollment. They existed in virtual isolation, although founded and maintained out of a commitment to the welfare of society through the preparation of learned public officials and clergy. To fulfill this mission, faculty required almost complete devotion to study and religious matters. However, during their few moments of freedom, students did engage in a large number of sports, but at no time did participation ever become a meaningful part of campus life.[3]

Developments in higher education between the Revolutionary War and 1875 determined the course that the college would follow in its rise to exalted position in American society. Institutions were initiated by well-intentioned persons in a number that far exceeded need or ability to finance. Without a corresponding increase in graduates of preparatory schools or sources of funding, more than 700 colleges were founded between 1780 and 1861. Fewer than 200 became permanent institutions.

Responsibility for the fate of the college rested with the president. The "old time" president, the type in office from colonial days to the final quarter of the nineteenth century, searched for answers to his problems through an approach that was personal. He gave public lectures, contacted students and preparatory school officials and appealed to church boards or legislatures. His choice of method was dictated by the fact that channels of communication between public and college had not been established; therefore, contact had to be made through a representative.

Presidents who headed institutions during the final years of the century faced an even greater financial problem. Finding the former method of securing support ineffective, they turned their attention to making the institution visible. Professors were expected to make public appearances and important contributions to knowledge were reported to newspapers and popular journals. The objective was the creation of an identity between denominational college and church membership or between state institution and general public.

These new techniques were far more effective in gaining support than previous ones but they were not nearly as important to the future of higher education as intercollegiate sport. Campaigns similar to the ones conducted by the presidents of Notre Dame and Penn State[4] were repeated throughout the nation. Some were equally successful, but many were not. In recognizing the importance of the publicity value of intercollegiate sport, many administrators were able to transform weak and struggling colleges into centers of higher education with national reputations.

Visibility, however, was but one contribution of intercollegiate sport to the rise of higher education. It was also in large measure responsible for the generation of unity among professors, students, and graduates that resulted in development of the concept of alma mater. Sporting contests not only generated the first extensive and intensive expressions of this loyalty but also prompted the creation of such important symbols of it as songs, cheers, and colors. That the institution's public image was associated with athletics, graduates generously contributed funds and energies to the development of teams. Eventually administrators discovered that alumni enthusiasm for sport could be used to the total profit of institutions. Homecoming day was but one of many efforts along these lines.

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[1] Although not in agreement on the desirability of the outcome, Hofstadter, *The Development of Academic Freedom in the United States* (1955) and Butts, *The College Charts Its Course* (1939) recognize the tremendous importance of the period.

[2] Frederick Rudolph, *The American College and University*, New York: Random House, 1962; John Brubacher and Willis Rudy, *Higher Education in Transition*, New York: Harper, 1958.

[3] Henry Sheldon, *Student Life and Customs*, New York: Appleton, 1901.

[4] Francis Wallace, *Notre Dame: Its People and Its Legends*, New York: McKay, 1969; Wayland Dunaway, *History of the Pennsylvania State College*, State College, Pa.: The Pennsylvania State College, 1946.

Before alma mater had any real meaning the most important unit among students was the class. Originally only a scholastic division, the class developed first as a social unit and later as a political one. Central to the emergence was the creation of practices which fostered a spirit of belonging among members and determined the relationship between classes. Fagging served these ends until outlawed by authorities. Hazing replaced it, and an essential part of the new system was the sports contest. Beginning about 1795, freshmen at Harvard were forced to compete against the sophomores in wrestling matches at the opening of the school year. The sport of these annual class confrontations at Harvard and other colleges changed from wrestling to football in the 1820s. Student opposition and faculty edict ended the contests in the late 1850s but by this time class clubs which were devoted to the conduct and promotion of various sports had appeared. As interest in this type of activity grew, hazing went into decline, and by the 1870s the practice had completely disappeared from many campuses. The organizational structure of the class did not come into being until late in the nineteenth century but the first class officials appeared with the arrival of sports clubs, and by 1875 the captaincy of football, baseball, or crew was a highly coveted position.

Students of the antebellum period were far different from their counterparts of the colonial era. These sons of self-made men were sent to college in increasing numbers to await the day they too would have the maturity to participate in the business or professional life of the new nation. Few of them felt that study of Latin, Greek, and Hebrew or the attention given to religious matters would be of value to them in the real world of commerce or industry. Their answer was the creation of an "independent" curriculum and a social life. The first was achieved through literary societies. These organizations encouraged the study of history, literature and science by maintaining libraries, purchasing scientific equipment and collections and promoting lectures, discussions and debates. Development of social life was a more difficult problem since it involved the question of faculty authority, and the issue resulted in numerous confrontations. Riots and disorders were frequent occurrences after 1820. During these disorders fire and explosives among other things were used to destroy buildings and professors and tutors suffered physical attacks. Many were seriously injured and one was stabbed to death. The unsettled condition continued despite implementation of stricter controls and dismissals for breeches of the code; at times members of an entire class were expelled. These difficulties disappeared after the Civil War. The change coincided with the growing belief that self-direction was the best form of discipline and the denial of the faculty's obligation to act "in loco parentis." During these same years students energy had turned to development of the extracurriculum. Its major agencies were the social fraternity, secret society and sports club. Enthusiasm for activity involving social intercourse was so great that the extracurriculum soon made the college a place of conspicuous leisure. In 1874 it was evident that the college was making an "admirable showing of varied and substantial attractions to the young men of the land." [5] One journal reported: "Already our institutions teem with new life, (and) through the bat, the oar, and the bars of the gymnasium, the American student aims at physical perfection." [6]

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[5] "University Education," *Hearth and Home*, 7 (July 18, 1874) 62.

[6] *Ibid.*

Participation in organized sport by members of the class clubs, and later literary, fraternity and professional school clubs, was valued almost entirely for its contribution to social interaction until the public attention given intercollegiate matches made the contest and its outcome the most important aspect of sport. Even after the introduction of intercollegiate sport, some time elapsed before students expressed much interest in such contests. During the early years, one wrote his mother in great detail and with much enthusiasm about the play, dress and social activity of the ball and rowing clubs but his plans to attend an intercollegiate meet only received the attention of an afterthought.[7] As the competitive aspect became more important, clubs in the various sports were united to form campus associations; and, in keeping with prevailing values, the highest achievement was for a class team to win the college championship. These same clubs were the first representatives of the college in intercollegiate contests. but with recognition that the outcome of such events had "become sacredly connected with the glory of Alma Mater herself"[8] college crews and teams were formed by selecting the most outstanding athletes in each sport for them. In placing the college team or crew at the top of the athletic structure, the class diminished in importance as a promoter of sport. The effect of the development was that loyalties formerly reserved for the class were transferred to alma mater.

That college loyalty should have its greatest expression in intercollegiate sport and campus sport would become central to the extracurriculum was not determined until late in the transition period. At issue was whether students would find intellectual or social-physical pursuits the most desirable form of activity.

Sport was rivaled for public acclaim and student attention by oratory and debate. Promoted by literary societies, these activities were far more popular than sport until the 1870s. The two phases of student life had co-existed for the years since the introduction of organized sport but the class and university hero was more likely to be an orator or debater than athlete. Even in the case of intercollegiate competition, celebrations following the return of victorious oratorical and debate teams to the campus were at least as enthusiastic as those given triumphant athletes. Still unresolved in 1875,[9] the matter was settled before the expiration of another decade.[10] Once determined the extracurriculum began to more and more revolve about sport.

Before the end of the century it was generally accepted that the truly desirable rewards of the college experience were to be found in the extracurriculum, and for non-athletes there were newspapers, glee clubs, and bands. Personal satisfaction was but one reason for the popularity of the "side shows." Involvement was the only way to become a "big man" on the campus, and this image was regarded as being of greater consequence in determining the future of a graduate than the academic record of a "greasy grind." Then too, the prestige of the institution was a factor. One professor marked the change in student attitude with a remark made to him in 1871. He was astounded to discover that the student wanted a degree from Harvard because it would be worth money to him in Chicago.[11] Since the reputation desired for the college was a popular one and the general public evaluated in terms of available evidence, those things that contributed most to making the institution visible were valued by students.

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[7] Amos French, ed., *Exeter and Harvard Eighty Years Ago: Journals and Letters of Francis O. French, '57*, Chester, New Hampshire: Privately printed, 1932.

[8] "The College Regatta," *Yale Literary Magazine*, 30 (October, 1864).

[9] Judson Smith, "Intercollegiate Contests," *New Englander* 34 (July, 1875) 518-29.

[10] Charles D. Warner, "Certain Diversities of American Life," *Fashions in Literature*, New York: AMS Press, 1969, pp. 77-114.

[11] Rudolph, 65.

Only on a very few occasions was the average citizen aware of the existence of higher education prior to late in the transition period.[12] Until then, the popular press paid scant attention to collegiate affairs,[13] and other sources of contact between the two worlds were limited in number. Even when events were considered newsworthy, it was difficult, if not impossible, for the general public to relate to it. The obscurity of the college began to disappear after the establishment of the intercollegiate sport.

Intercollegiate sport began in 1852 with a race between one Harvard and two Yale boat clubs. A reporter for the New York *Tribune* predicted that such affairs would "make little stir in the busy world" [14] but more than 10,000 spectators gathered at Worcester, Massachusetts, to see the third race between crews from the same schools. The pursuit of victory intensified with each regatta. By 1870, the university shell had replaced the club and class boats in the competitions and students, with assistance from alumni and professors, had purchased improved equipment, built boat houses, and hired professional trainers. Although at times a front-page item in some New York City newspapers, the influence of the annual regatta on public opinion was limited until the 1870s. In 1875, the *New York Herald* devoted two and one-half pages to report the event, and the coverage of *Harper's Weekly* increased from a few paragraphs to several feature articles and numerous illustrations between 1871 and 1875. By this time hundreds of persons were gathering in hotel lobbies or at newspaper offices and other locations in the major Eastern cities to receive telegraphic reports direct from the scene of the race, and the numbers of spectators viewing the race approximated 50,000.

The 1870s were also the years during which the regatta became important to students at colleges other than Yale and Harvard. In 1875, thirteen colleges were represented in the event and crews from several other institutions were denied the right to participate. Requests for an open regatta followed the attention given the 1869 Harvard-Oxford contest in England and this resulted in the holding of a union regatta in 1871. It was the surprising victory of the "farmers" from the Massachusetts Agricultural College (University of Massachusetts) in this event that brought about the rapid expansion of the regatta. The results encouraged students at other institutions to seek prestige for alma mater and personal notoriety.

At Columbia's victory celebration in 1874, President Barnard said: "You have done more to make Columbia College known than all your predecessors have done since the foundation of the college by this great triumph. Today, wherever the telegraph cable extends, the existence of Columbia College is known and respected." [15] The next year President White of Cornell declared that the victory did more for the prestige of the institution than the Trustees could have accomplished with $100,000. He later cancelled a $1,100 note held by Cornell University against the Cornell Navy. Across the back of the note he wrote charged to advertising.[16] The alumni had also recognized that the events had made the college visible and that the outcome of the contests were important to the image of alma mater. Their contributions had made possible the construction of a $15,000 boathouse at Yale and the architect had completed plans for a $10,000 facility for the Columbia crew. The question of instantaneous prestige was the topic of the first public discussion of intercollegiate sport.[17]

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[12] For example, *Harper's Weekly* 2 (October 2, 1858), noted the beginning of a new school year in a brief article, "Opening of Schools and Colleges," pp. 626-27. The central point was that while institutions were engaged in noble work they went unnoticed.

[13] Vera Butler, *Education As Revealed By New England Newspapers Prior to 1850*, Doctor of Education dissertation, Temple University, 1935.

[14] "Regattas on Lake Winnepiseogee," New York *Tribune*, Aug. 10, 1852.

[15] "Columbia's Heroes," New York *Herald*, July 22, 1874.

[16] Walter Rogers, *Andrew D. White and the Modern University*, Ithaca: Cornell University Press, 1942.

Crew was the first intercollegiate sport and the most important one to 1875 but it was not the only one. Picked teams from Williams and Amherst played the first intercollegiate baseball game in 1859. Competition between class clubs from rival institutions began in the 1860s and college "nines" were formed shortly thereafter. Many of the important contests were played at the time of the regattas. A league was formed in 1879 and during the 1880s, baseball became the leading collegiate sport. Intercollegiate football began with a game between teams from Princeton and Rutgers in 1869. The challenge which resulted in the contest may have been prompted by the result of a baseball game played earlier between teams from the same schools. League play began in 1876 but football did not surpass baseball in popularity until the 1890s. Until the public press made the results of games important to the image of alma mater, student editors frequently had to plead for the appearance of outstanding athletes (crewmen, and baseball players) on the football field. Intercollegiate track began as an appendage to the regatta in 1873. By 1875 the meet had grown from one event and three competitors to ten events, and athletes from ten colleges. The Intercollegiate Athletic Association of Amateur Athletes of America (ICAA) was organized in 1876. A decade later the sport was an established part of the intercollegiate athletic program. Baseball, football, and track were not tremendously important to the extracurriculum or the visible college during the transition years but the formalization of campus play and promotion of intercollegiate contests in them provided the foundation for the important developments that took place during the next period.

Higher education had not assumed all the characteristics or achieved the image that made the institution so important to American society by 1875 but due to changes during the transition years it stood on the threshold of the new era. Curriculum reform initiated by students through literary societies was continued by administrators. Eventually the curriculum provided for all who could profit from advanced instruction. The extracurriculum, introduced at the same time, made the college experience meaningful for those whose ambitions demanded more than attention to professional preparation or intellectual attainment. An essential feature of this new dimension to the college experience, organized sport, also came into existence during the transition years. Many of the activities included in the all-important extracurriculum were stimulated by intercollegiate sport, and it was intercollegiate sport that helped make the nation college conscious. It also first united students, faculty, and alumni in affairs that had an effect on the prestige of alma mater. These changes made higher education in 1876 a far different institution than the one that had existed throughout the colonial era. However, the institution that had risen to such heights in student and public esteem by 1900 was but an expanded version of the one that had been formalized a little more than twenty-five years earlier.

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[17] Benjamin Dwight, "Intercollegiate Regattas, Hurdle-Races and Prize-Contests," *New Englander* 35 (April, 1876) 251-79; George Green, "College Athletics," *New Englander* 35 (July, 1876) 548-60.

The Early Years of Major-League Baseball: A Preliminary Report of Reminiscences of the Survivors

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The writer, long interested in major-league history, often noted in his reading the conflicting accounts of some of baseball's most celebrated episodes, e.g., the "Merkle incident," Ruth's "called shot," and the "Black Sox sellout." Finally, in 1963, he concluded that survivors of these and other incidents might be able to give fresh and, conceivably, more objective accounts and he entered upon the project of corresponding with these veterans.

Sources of Addresses

The first difficulty encountered was the acquisition of home addresses of the survivors. Among those who lent valuable assistance in this search were Fred Lieb, retired sportswriter and World Series historian; Chuck Stevens, Executive Secretary of the Association of Professional Ball Players of America; officials of *The Sporting News;* and officials of some of the major-league clubs. This difficulty was eased considerably with the publication of address lists by R. J. "Jack" Smalling and Richard Burns. Additional addresses were provided by Black Sox chronicler Eliot Asinof[1] and autograph collector Roy Pitts.

Techniques in Acquiring Responses

Initial efforts to collect reminiscences from the surviving veterans were gratifying although less than a complete success. Some, such as Tommy Leach, at the time the last survivor of the 1903 Pittsburgh team that played in the first modern World Series, wrote fairly extensive replies. Some penned answers in the margin of the letter containing the questions while others simply failed to respond.

Conflict arises in the attempt to solicit responses, however. On the one hand is the desire of the historian to obtain as much information as is available; at the same time humanitarian considerations dictate reasonable limits on the intrusion into the privacy of these veterans. Further, as with most questionnaires sent to relatively disinterested people, the greater the length and complexity the smaller the percentage of returns. Thus, with rare exceptions, a one-page letter including the questions has been the practice. In order to ask questions of some importance, it is essential to thoroughly study the player's record as well as baseball literature of his era. The questions are brief and carefully worded.

With the publication of *The Baseball Encyclopedia*[2] it became evident that many data, e.g., how a player batted and threw and how tall and heavy he was, were missing. One effort in the acquisition of the missing data was the development of a player-information sheet. Each veteran to whom a letter is written also receives the player-information sheet. On it is listed the information that is missing for each of his teammates with the request that he supply the data as he is able to recall. Also on this sheet is space for him to select his all-time, all-star team. A stamped return envelope is enclosed to expedite his replies.

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[1] Eliot Asinof, *Eight Men Out* (New York: Holt, Rinehart & Winston, 1963).

[2] *The Baseball Encyclopedia* (New York: The Macmillan Company, 1969).

For each reply from a veteran an acknowledgment is sent, usually within several days. Often, responses to questions suggest additional questions that should be asked. For example, Ernest Ovitz' address was the U.S. Indian Service in a midwestern town. A question as to whether he was of American Indian blood elicited a negative response. Rather he was a physician with the U.S.I.S. The latter knowledge prompted questions about his undergraduate and professional education and these were included in the acknowledgment of the first set of responses. Maintaining the correspondence has become a major difficulty.

Oral History

A more thorough approach to the collection of reminiscences is the use of the taped interview. Among the advantages of taped interviews are the relatively greater ease of responding orally rather than in writing, more complete coverage of the subject, the opportunity for immediate clarification of statements, and the permanent record of the player's voice and speech. Prime disadvantages are the reluctance of some players to spend the longer time required for the interview and the cost in time and money for the interviewer to travel often considerable distances to the player's home. A case in point is the 75,000 miles or so covered by Ritter in the collection of reminiscences for his fine book.[3]

Reminiscenses

No systematic effort has yet been made to organize the content in the letters received by the writer from the veterans. What follows, then, is a sampling of reminiscences that have been selected to illustrate a variety of anecdotes.

John Henry Hollison. In 1892, Doc Hollison pitched four innings in relief for Cap Anson's Chicago Colts against the Cleveland Spiders and, although his pitching was all for which a manager could ask (one hit, no walks, and two strikeouts), that was the extent of Hollison's major-league career. At that point in the game, he packed up his gear and left the park in order to reach the Loop in time to see that the afternoon newspapers were distributed to his group of young hawkers. While working this job, Hollison managed to complete his medical degree. Subsequently, he maintained a practice in Chicago well into his nineties. Why didn't he stay with the Colts? "Made more money playing as a 'RINGER' in different cities."[4]

David Jefferson Jones. When asked how he acquired the nickname of "Kangaroo," he replied, "From my jumping propensities. . . ."[5] In 1902, he had reversed the usual trend and had jumped from the St. Louis club in the American League to the Chicago Cubs.

John Tortes Meyers. Great Indian catcher of the New York Giants, Chief Meyers handled the slants of Christy Matthewson from 1909-15. In reminiscing about the memory of manager John McGraw, Meyers commented: "We had another wonderful memory on the ball club—Fred Merkle. Oh, the . . . unkindest cut of of all to call that man a bonehead. . . . Mr. McGraw never consulted anyone on the team as to strategy . . . he didn't ask Mathewson or (me) or anybody on the team. He'd say 'Fred, what do you think of this?' And they called him a bonehead. He was one of the smartest men in baseball that I ever knew."[6]

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[3] Lawrence S. Ritter, *The Glory of Their Times* (New York: The Macmillan Company, 1966).

[4] Letter from J. H. Hollison to the writer, September 3, 1968.

[5] Letter from David J. Jones to the writer, October 4, 1963.

[6] Tape of interview of John T. Meyers by the writer, September 4, 1965.

Charles Benjamin Adams. When Babe Adams was asked why manager Fred Clarke selected him, a rookie, to start the second game of the 1909 World Series when there were other more experienced pitchers available, he wrote, "I don't know the reason Clarke selected me. Clarke just tossed me the ball and said, 'You're it; start warming up.' It was a complete surprise to me."[7]

Albert Henry Bridwell. Most famous for hitting the single in 1908 that resulted in the "Merkle incident," Bridwell, when asked who was the toughest pitcher he ever faced, joined a large chorus of respondents with his choice. "In exhibition games I saw some real tough pitchers like Walter Johnson, Joe Wood, and others. But for the toughest I faced was one I had to face through several seasons, Mr. (Mordecai) Brown of (the) Chicago Cubs. I would rather face any left hander in (the) league than this right handed 3 fingered brown."[8]

Among the Missing

The task of collecting reminiscences soon led to a bit of tangential research. Where were all those veterans of the turn-of-the-century era not listed as deceased in *The Baseball Encyclopedia* but for whom addresses appeared to be unavailable? If some were still living, how might they be located? Smalling, with the help of other investigators such as Allen, Simenic, McAlister, DuVall, and Jubyna, had begun publication of a series of data sheets in which deaths, addresses, and other similar facts are reported. In spite of their efforts, several hundred players from that period are still among the missing.[9]

The cases of two of these "missing" players recently have been concluded by the writer with the assistance of a number of valuable allies in California and elsewhere. The story of one of these, Carl Spongberg, has been detailed previously.[10] The other involved Ervin King Harvey who was born in Saratoga, California (about ten miles from San Jose). A local reporter published a plea for information but to no avail.[11] A search of the death records in the Santa Clara County Recorder's office, however, produced an entry for an Ervin Harvey who had died in Santa Monica in 1954. Acquisition of a death certificate from the Los Angeles County Recorder confirmed that this was the player sought. Contact has been made subsequently with Harvey's son.

The case of Spongberg was considerably more difficult to solve than was Harvey's. This is because *The Baseball Encyclopedia* and other publications could provide no information other than his name (which was misspelled) and his playing record for the part of one game that he pitched for the Chicago Cubs in 1908. Similar misspellings and typographical garblings have led more than one investigator on a wild goose chase. A prime example is the instance of "John H. Carlock," listed in many record books as a pinch hitter in one game for Cleveland in 1912. Listed in *Sporting Life* as Carlock, research by Simenic has revealed that the box score of the same game as it appeared in the Cleveland *Plain Dealer* lists the name as Carisch, a player about whom there is no mystery.[12] How many other phantom players appear in record books is, of course, still unknown.

In addition to death records, city directories often prove helpful in tracing the missing. Occasionally, a letter addressed simply to the city of birth, if not too large, will produce a response from the player. Many former players seem to have returned eventually to or near their birth locales. In some instances, veterans who have maintained correspondence with teammates are able to provide addresses or at least leads.

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[7] Letter from Charles B. Adams to the writer, July 18, 1965.

[8] Letter from Al Bridwell to the writer, August 30, 1968.

[9] For a partial list of the missing, contact the writer, Department of Physical Education for Men, San Jose State College, San Jose, 95114.

[10] W. F. Gustafson, "The Case of Carl Spongberg," *The Sports Trader*, 6 (December 15, 1970), pp. 1, 8.

[11] Dick Barrett, San Jose *Mercury News*, July 19, 1970, p. 18E.

[12] Letter from Clarence Blasco, Van Nuys, California, to the writer, August 19, 1970.

Possibilities of Similar Research in Other Sports

As with baseball, to the writer's knowledge little has been done yet to systematically collect the reminiscences of veteran participants in other sports. Professional football, for example, has been organized for only about a half century and many of its pioneers are alive. With the passing of each day, opportunities evaporate with the deaths of former sports stars.

Concluding Statements

Often, the writer has been asked why he bothers to spend all the time and energy in corresponding with baseball veterans. "Of what importance is such work?" is a fair question. Perhaps former baseball commissioner Ford Frick has supplied a sufficient rationale:

> We are living in an era of doubt and controversy. And the thing that is needed most of all is continuity—something that has gone on for years and years, something to cling to.
>
> Children have the right to dream and to have their heroes to idolize. Baseball provides them.
>
> Today is only twenty-four hours, but behind us are thousands of yesterdays. Anything that connects yesterday to today and today to tomorrow is important because it means continuity . . . . But without memories of the past, there could be no dream of the future. Without those yesterdays, there could be no bright tomorrows.[18]

The Cold War and the Olympic Games

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The relationship between sports and politics deserves serious consideration from scholars in the fields of history, political science, sociology and physical education. Unfortunately, scholars in the West, viewing sport as child's play, have only recently attempted to understand the political and social nature of sport. In the East, sport sociology has long been established as a sub-discipline. This paper is a modest attempt to study one aspect of the relationship between politics and sport; the affect of the cold war on the Olympic games. While it would be both interesting and significant to study the affect of the Olympics on the cold war, it can be given only brief mention within the scope of this paper. It is the authors' hope that this paper will stimulate others to study this important subject.

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[18] Ford Frick, upon induction into Hall of Fame, Cooperstown, N.Y., as quoted by Edgar Munzel, "*The Sporting News*, August 8, 1970, p. 5.

After World War II Europe was reduced to military and political impotence. This left the Soviet Union as the only important military and political force on the continent of Europe. The United States tried to check Soviet power by aiding American allies and by threatening the Russians with atomic retaliation. This policy became short lived when the Soviets exploded their first atomic bomb, thus ending the period of Pax Americana. The fear of nuclear holocaust has helped the world to avoid a third global conflict, but the world has suffered from the tensions and pressures of a "cold war." Both the U.S. and Russia, unable to dominate the globe through the use of military force have used political and cultural techniques to increase their influence.

Barghoorn in discussing the uses of culture for political purposes, states:

> The free world need not fear the cultural contest, which in any case, in an increasingly interdependent world, cannot be dodged.[1]

One of the important weapons in the cultural cold war has been sport. The Soviets, in particular, have made rapid strides in this direction. Michael T. Florinski, editor of the Russian Civilization Series, stated

> . . Russian athletes have scored notable successes and are at the top of the list of every, or nearly every branch of athletic endeavor. This rapid success of a nation which actually began from scratch has attracted wide attention and has greatly contributed to the prestige of the USSR.[2]

Both the United States and Russia send their athletes abroad in cultural exchange programs. Soviet athletes, unlike Soviet journalists and officials, do not have to engage in propaganda. The excellence of their performances speaks for itself.[3] Arthur Lentz, Executive Secretary of the USOC, and an important observer of all the Olympic games since 1948, feels an athlete's victory or defeat should not be viewed as an indicator of his nation's achievement. In his years of experience, however, Lentz has observed that a nation's image is partially determined by the performance of its athletes.[4] The belief that a nation's image is effected by the performance of its athletes caused the most important and immediate effect on the Olympic games, the entry of the Soviet Union in 1952. The Soviet's first Olympic entry, since Czarist days, was not a shocking or sudden unplanned event. Morton states:

> With Russia's post war entry into European and world sport competitions, speculation was rife whether or not she would participate in the first post war Olympic games, those of 1948, but since the procedure for participation required that a National Olympic Committee (NOC) be formed, which had to be recognized by the IOC, it became apparent by 1947, since this had not yet occurred, that the Soviet Union would bypass the 1948 Olympic games held in London. Soviet visitors were observed, nevertheless, taking copious notes of the proceedings. Spurred by the party decision of 1948 calling for Soviet world sport supremacy, it became only a matter of time until the USSR would apply for Olympic admission.[5]

Several East European athletes, who were interviewed by the authors, stated that they thought the Russians had two main reasons for entering the Olympic games. First, it would show the world that the communist way of life was better and that it produced a healthier and stronger people; second, it showed satellite nations that they should look to the Soviet Union for guidance and leadership in all fields. A study of the literature emanating from the Soviet Union seems to bear out this point. The following statement from a Soviet sport book is one example:

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[1] Frederick C. Barghoorn, *The Soviet Cultural Offensive* (Princeton: Princeton University Press, 1960), p. 337.

[2] Henry Morton, *Soviet Sport* (New York: Collier Books, 1963), p. 10.

[3] Barghoorn, op. cit., p. 145.

[4] Interview between Arthur Lentz and the authors, October 24, 1970.

[5] Morton, op. cit., p. 83.

> The triumph of our athletes . . . is proof of the superiority of the Soviet socialist culture over the rottenness of the culture of capitalist countries.[6]

It has been stated in this paper that the first immediate effect, that the cold war has had on the Olympics was the entry of the Russians into the games. All other effects naturally spring from this primary fact.

It would be unfair to say that the Russian entry into the Olympics removed the games from a pure and idealistic level. The Russian entry merely made the world more aware of some of the chinks which had already existed in the idealistic wall which surrounded the games. Even before the Russians entered the games, they were rife with nationalism, politics, score keeping, and professionalism. The new intense pressure of Olympic competition between the U.S. and Russia only brought these problems to light.

The overemphasis on nationalism at the Games is a problem for which Baron De Coubertine had no solution.[7] One of the chief reasons for the supra nationalism has been the chauvinism of the press. Reiss states,

> It has long been the custom to speak of America, England or Russia as winners at the games.
>
> The fact that this is so is due above all to the Sports Press, whose internationality is even less in evidence than that of the sportsman himself or of the public. Over the Olympic Games, in fact about all sporting events on the international level, the press reveals an almost intolerable chauvinism.[8]

The traditions of the games have also added to the fire of nationalism. If the IOC truly wanted to tackle this problem, it would have long ago eliminated the raising of flags and the playing of national anthems. The IOC's unrealistic position that some nationalism is acceptable makes it partially responsible.

Perhaps the greatest manifestation of nationalism at the Olympics has been score keeping. Since 1896 the press has declared an overall unofficial winner at each of the Olympic games. Gronbach, an ex-olympian, lists the unofficial winners of the first thirteen modern Olympic games.[9] This demonstrates that the problem of score keeping did not originate with the Soviets. Score keeping at the Olympics reached its depths during the games in 1952 when different scoring tables resulted in both the U.S. and Russia declaring themselves the unofficial winners of the games. The problem became so repugnant to the IOC after the Russian entry into the games that Avery Brundage felt compelled to make the following statement:

> The games are not, and must not become, a contest between nations, which would be entirely contrary to the spirit of the olympic movement and would surely lead to disaster. For this reason there is no official score of nations, and tables of points are really misinformation because they are entirely inaccurate. . . .
>
> . . . The IOC resents attempts to use the games as a political instrument or to pit one country against another. We trust that

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[6] S. L. Akselrod, Fizicheskoia Kulturai Sport USSR (Moscow: Fizkulturai Sport, 1954), p. 52.

[7] Curt Reiss, "Sport and the Press," *Sport and Society*, Alex Natan, ed. (London: Bowes and Bowes, 1958), p. 73.

[8] *Ibid.*

[9] John V. Grombach, *Olympic Cavalcade of Sports* (New York: Ballantine Books, 1956), p. 171.

> you will do everything in your power to discourage the publication of scoring tables, which are quite worthless as stated above.[10]

The pressure of the IOC has helped abate the point system of scoring, but it has not stopped the currently popular scoring technique of counting gold, silver, and bronze medals won by each nation. Score keeping and nationalism are just two aspects of the intense pressure to "win" the Olympic games. Another important aspect has been the growth of professionalism.

From the moment the Russians made the decision to enter the games their efforts were marked by organization and heavy funding. At the same time, American efforts have been marked by feuding and a disturbing lack of funds. It could be argued that the Russians professionalize their athletes. The same thing, however, could be said of many of our college athletes. The point here being that with the added importance the games have taken on, the Americans, the Russians, and many other countries for that matter, have not been willing to guarantee the amateur status of their athletes. The IOC and the International Federations have delegated the responsibility for checking amateur status to the individual countries, which is just as good as having no control at all. This has made a mockery and complete hypocrisy out of the old anglo-saxon definition of amateur. The Olympic amateur code was, however, dying of obsolescence anyway. What athlete could achieve a world record while living up to the following code:

> I declare on my honour that I am an amateur according to the rules of the International Federation governing my sport and I have participated in sport solely for pleasure and for the physical, mental or social benefits I derive therefrom; that sport to me is nothing more than recreation without material gain of any kind, direct or indirect, and that I am eligible in all respects for participation in the Olympic games.[11]

The rule also prohibits subsidization by governments, businesses and educational institutions which eliminates practically every athlete in the world. About the only person able to compete under this rule is Avery Brundage.

Even before Russian entry into the Olympics many nations were subsidizing their athletes through business, government or educational institutions. The Russians, however, according to many East European athletes broke the amateur role in a more organized and widespread manner. This has brought the problem of amateur status to a head. Can the nations of the world compete fairly against Soviet athletes?

Arthur Lentz believes that it is hopeless to harp on the Russian abuses of the amateur code. He believes the U.S. can compete with the Soviet Union if it can reorganize the USOC in a way that will give it the power to direct the Olympic movement. At present, the feuding between the AAU and NCAA, the controlling organizations of the USOC, has hampered U.S. Olympic development. Also needed is a large infusion of government cash to foster sport development programs. With these changes, Lentz believes that America can compete successfully in the Olympics and maintain its present philosophy and system of athletics.[12]

John Kelly, newly elected president of the AAU, shocked many older members of that organization when he attacked the hypocrisy of the amateur code during his presidential address. The *Times* in reporting Kelly's address stated:

> He is also interested in changing the definition of amateurism, to make its rules less hard and fast than previous AAU leaders have dictated . . .

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[10] *Bulletin du Comte International Olympique*, No. 53 (February, 1956), p. 137.

[11] Willy Meisl, "The Importance of Being Amateur," *Sport and Society*, Alex Natan, ed. (London: Bowes and Bowes, 1958), p. 137.

[12] Lentz interview, October 24, 1970.

> He insists, however, that the AAU must enforce all rules on its books, until international governing bodies sanction changes, even though they may be inconsistent, hypocritical and not in keeping with the times.[13]

While Avery Brundage and the other old timers control of the IOC there is not much chance for change in amateur rules. Brundage is and has been a staunch supporter of the amateur code.[14] Whether the nations of the world compete within the framework of the present amateur code or under a new code, one thing is clear, this decision will be influenced by the realities of international politics. Before any nation allows the amateur code to be tampered with they will make sure that it will not handicap their nation.

During the 1170 years of Greek Olympiads the games provided a respite from wars and political bickering. During the 74 years of modern olympics, the games have been totally involved in political squabbles. This has been especially true during the cold war period. The role of the olympics in promoting international good will has been insignificant when compared to the international ill will that has been reflected and expressed at the games.

There have been many incidents where politics have interfered with the Olympic games. Below some examples are listed.

1) *The Hungarian-Russian water polo match of 1956*—The Russian invasion of Hungary just before the 1956 Olympics created a tremendous feeling of hatred between the athletes of the two countries. This resulted in a bloody battle when the two nations met in the final game of the water polo championships. The Hungarian team was instructed by the Russians before hand to throw the match. When the Russians realized that the Hungarians were playing to win, the fighting started.[15]

2) *The walk out of Communist China from the 1956 Games.* The Chinese communists, slated to participate in the Olympic games for the first time in 1956, walked out of the Olympic village when the Chinese Nationalist flag was raised.[16] The problem of divided nations needing dual recognition has been a unique development of the cold war. The divided nations of East and West Germany, and North and South Korea have both presented problems to the I.O.C.

3) *The walk out of Arab and European nations before the 1956 games.* Several Arab nations refused to participate against Israel, Britain and France because of the invasion by those three countries of the Suez Canal.[17] Several European nations refused to compete against Russia in 1956 because of the Russian invasion of Hungary.[18] Nations, rather than forgetting their problems during the Olympic games, have used the games to demonstrate their feelings.

4) *The exclusion of South Africa from the 1968 games.* At the last Olympics a protest by communist and Afro-Asian countries forced the ouster of South Africa from the games. This was the first time a nation was prohibited from competing because of their own internal political problems.

In addition to international protests there were other ways in which politics crept into the Olympics.

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[13] *New York Times*, December 7, 1970, p. 69, c. 1.

[14] Avery Brundage, "Stop-Look and Listen, "*Bulletin du Comite International* No. 45 (June, 1947), pp. 20-21.

[15] Interview with an East European athlete

[16] *New York Times*, November 7, 1956, p. 4

[17] *Ibid.*

[18] *Ibid.*

Great prestige is placed on being the Olympic host nation. Moscow made a bid to be the Olympic city in 1976, but unfortunately this bid was turned down in favor of a western city, Montreal. This quickly brought complaints of political bias from the Russian delegates to the I.O.C.

> The I.O.C. members evidently think the staging of Olympic games is a privilege of the Western world, but such an approach can hardly promote the Olympic movement, co-operation or mutual understanding.[19]

Individuals have also suffered as a result of politics at the games. Tommie Smith and Juan Carlos were expelled from the Olympic village in Mexico because of their protest for the civil rights of black athletes and black people in general.[20] Emil Zatopak, who was a highly respected olympic runner and coach before the Russian invasion of Czechoslovakia, is now a street cleaner. He made the grievous mistake of supporting the Dubcek regime.[21] Vera Caslauska, the Czech gymnast, and her husband, are now currently unemployed as a result of her protest in Mexico against the Russian invasion of Czechoslovakia.[22] Many East European athletes have been denied the right to compete in the games because the communists will not allow anyone to compete who is not politically reliable. The author (Miklos) is a prime example of this point.

All of these examples of national and international political problems disturbing the Olympics demonstrates that the games reflect the political tempo of the times. Coubertine's dream of having the Olympics alter international feelings seems to be what it started out to be, just a dream.

The cold war has had a disturbing effect on the Olympic games. All of the problems of the games, nationalism, professionalism, score keeping, politics, and an overemphasis on winning have been brought to the surface. These problems existed before the Russians entered the game, but they were never quite as glaring as they became during the cold war.

It is a shame that the Olympics have been influenced by the cold war, while the cold war has hardly been influenced at all by the Olympics.

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[19] *Soviet Sport*, No. 6, 1970, p. 2.

[20] Harry Edwards, *The Revolt of the Black Athlete* (New York: The Free Press, 1969).

[21] *New York Times*, December 6, 1969, p. 10, c. 1. Also in an interview with an East European athlete.

[22] *Ibid.*, October 25, 1969, p. 16, c. 4. Also in an interview with an East European athlete.

Sport Science, The Modern Disciplinary Concept of Physical Education

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For more than a decade, various leaders have recognized the desirability of securing recognition for Physical Education as a separate discipline and of encouraging broader and more intensive investigation of man in our culture. The task has been to devise a conceptual model of an academic discipline for Physical Education that would be true to our heritage, clear and decisive enough to give direction and vigor to our efforts, and relevant to today's modern cultural patterns. If our field is to continue to develop and provide effective leadership for our society, it must accept the responsibilities for a broader portion of the study of man and in an area as yet unclaimed by other disciplines. The concept of Sport Science,[1] the modern academic discipline for Physical Education in the '70's, fulfills the "task" requirement in every respect. This is not just a visionary, theoretical concept that is under lengthy philosophical discussion to be attempted some time in the future, but an actuality for one of the largest undergraduate programs in the country. A liberal arts academic major based on this concept, which will be put into operation this fall by the Staff of the Men's Physical Education Department of the State University College at Brockport, New York represents the first program of its kind in America. This program is the result of a two year study of the development of Physical Education towards such an academic discipline.

Maturing Through Specialization of the Original Physical Education Field

In the 1930's, Physical Education was a term used to cover a variety of activities such as sports, games, hygiene, recreation, and dance. To write a concept for a discipline broad enough to develop all of these areas at that time would have been an impossibility. Yet as hygiene became Health Education, Recreation developed its own specialty, and Dance became a Fine Arts subject,[2] the essential elements of our field crystallized. As each one of these groups matured and left the Physical Education "fold," cries of anguish were raised concerning their future welfare, as well as the future of Physical Education. However, history has verified the wisdom of their decisions for specialization and independence. Unhampered by the restrictions of a "parent" philosophy and

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[1] Thomas J. Sheehan, "Sport: The Focal Point of Physical Education," Quest, Monograph X, May 1968, p. 59-67.

[2] Gladys A. Fleming, "Professional Preparation and Certification for Dance," *Journal of Health Physical Education and Recreation*, February, 1970, p. 32-34.

loyalty, they have prospered. Now, Physical Education, reduced to the elements of sport and sport-like activities, can be conceptualized as an academic discipline around the sport phenomena of our culture.

Early Recognition of the Prominence of Sport to Physical Education

Seward G. Staley of the University of Illinois pointed out two pertinent facts concerning our field in his book entitled, *Sports Education,*[3] published in 1939. First, the term Physical Education was a mis-nomer for the field since it perpetuated the long discredited psychological theory of separate or departmentalized learning, rather than the organistic theory used today. Second, he pointed out that since the time of the ancient Greeks the field has primarily been composed of sport and sportlike activities. He proposed that a more relevant name for the field would be Sports Education.

Staley's contention concerning the prominence of sport in Physical Education received considerable support from the findings of the Committee on Curriculum Research of the College Physical Education Associations commonly referred to as the LaPorte study and score card.[4] Since its publication in 1937, this study has been the most widely accepted curriculum guide for evaluating and improving Physical Education programs in our country. One of the basic standards used for evaluating and improving curricula was a ranking of 30 of the most common Physical Education activities in order of the importance of their contributions to Physical Education on the basis of five widely accepted objectives as evaluated by several hundred leading Physical Directors. The first 21 of these activities listed were sports and sport like activities.[5] The next three were forms of Dance, and four of the last six activities were sports.

The evidence that the Physical Education program is almost exclusively devoted to sport has increased since the '30's and must be fully recognized if the profession is to make any progress towards a clear and accurate concept for an academic discipline.

Academic Recognition of the Importance of the Sport Phenomena

The last 15 or 20 years have seen the development of national and international associations for the study of specialized sport areas such as Sport Medicine, Sport Sociology, and Sport Psychology. These scientists recognize the importance of the sport phenomena in our culture and do not equivocate about the use of the term, but use it as an accurate description of their interest and area of investigation. National and international scientific organizations have recognized the quality of their research and the importance of their investigative areas. For instance, at the Dallas meeting in 1968 of the American Association for the Advancement of Science,[6] Dr. Paul Weiss led a symposium entitled "Sport and Its Participants" at which many of the association leaders participated. To this writer's knowledge, this recognition has never been previously accorded to Physical Education.

At this meeting were the beginnings of a fourth association, the Sport Philosophers; the most notable of these, of course, was Dr. Paul Weiss who led the discussions of a panel of philosophers interested in the sport phenomena.[7]

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[3] Seward C. Staley, *Sports Education*, A. S. Barnes & Co., New York, 1939, p. 5-7.

[4] Wm. Ralph LaPorte, *The Physical Education Curriculum*, College Book Store, Los Angeles, 1937.

[5] *Ibid.*

[6] *Program, American Association for the Advancement of Science, Annual Meeting*, Dallas, Texas, *December 1968*, Symposium—"Sports and Its Participants," Paul Weiss.

[7] Paul Weiss, Sport: *A Philosophical Inquiry*, Southern Illinois University Press, Carbondale, Illinois, 1969.

It is obvious that a concept drawing these four groups together, and synthesizing their information concerning the understanding of man as he participates in the sport area is sorely needed. Failure to associate Physical Education with these groups at every level will hinder our potential for effective investigations of man as he participates in the sport phenomena. (At Brockport the faculty who are responsible for the Biological, Psychological, Sociological, and Philosophical area of Sport will maintain membership in these associations to ensure the greatest possible involvement for themselves and their students in this vital area of our culture.)

The Attempt to Formulate a Discipline on a Concept of Human Movement

Attempts to formulate an academic discipline of the "human-movement" concept has been attempted several times, starting in 1917,[8] but without much success. Kinesiology or the study of human movement has long been an integral part of the professional Physical Education curricula,[9] but it has never attempted to commandeer the field. However, in the last 15 years dance-oriented leaders have attempted to apply the theoretical idea of Rudolp Laban to Physical Education. The first attempt was "movement education" which never quite lived up to its exaggerated claims[10] and whose basic assumption is directly at odds with the latest scientific information.[11] Currently, the same group is attempting to theorize Laban's ideas into an academic discipline for Physical Education. Laban's theory and terminology are so foreign when applied to sport as to be incomprehensible to sports-oriented leaders who are responsible for the major part of the Physical Education program. Generally the criticisms of the "human movement" concept fall in these categories:[12,13,14,15,16]

1) Originally the "human-movement" concept planned to study the entire gamut of movement possible to man. Since it became apparent this was an impossible task, they then proposed to limit their concept to only those activities involved in Physical Education. The logic and rationale of the original position have never been adjusted to the new contracted concept.[17]
2) The emphasis on "movement" minimizes the importance of the behavioral sciences so important to a full understanding of man and society.[18]
3) Dance theories and terminology are not effective for either the study of man or sport.
4) The distinct lack of clear operational definitions produce hazy and incomplete concepts that fail to guide and direct investigative effort.

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[8] Karl W. Bookwalter, and Harold J. VanderZwaag, *Foundations and Principles of Physical Education*, W. B. Saunders Co., Philadelphia, 1969, p. 66.

[9] *Ibid.*

[10] Lawrence F. Locke, "Movement Education—A Description and Critique," p. 223; R. C. Brown, B. J. Cratty, *New Perspectives of Men in Action*, Prentice Hall, Englewood Cliffs, New Jersey, 1969.

[11] *Ibid.*, p. 217-218.

[12] Sheehan, *op. cit.*, p. 65.

[13] *Ibid.*

[14] Editors, "Critique," *Quest*, Monograph II, April 1964, p. 25-26.

[15] Earl L. Wallis, Book Review, *Theory in Physical Education: A Guide to Program Change*, Camille Brown and Rosalind Cassidy, Philadelphia: Lea & Febiger, 1963, *Quest*, Monograph II, April 1964.

[16] Sharon B. Farguer, Review of the Same Book, *Quest*, 1964.

[17] Warren P. Fraleigh, A Prologue to the Study of Theory Building in Physical Education, *Quest*, Monograph 12, May 1969, p. 30.

[18] Marion R. Broer, "Movement Education: Wherein the Disagreement," *Quest*, April 1964, p. 19-24.

The leaders of the "human-movement" concept have been working in a direction contrary to our historical development.[19] Furthermore, their concepts formulated for dance, a small fractional part of our field, cannot be successfully applied to the study of man as he participates in sport. The "dance-oriented groups' " efforts to force their concepts on the great rank-and-file of sports-oriented Physical Educators have produced considerable animosity and a feeling of apathy towards our national organization. The alternative is to turn to a modern concept that has clarity and greater promise for securing a more prominent role for our profession in society.

The Sport Science Concept

Physical Education has matured beyond its educational objectives to the study of man as he participates in the sport phenomena of our world civilization. This broader viewpoint in no way eliminates the former educational responsibilities of Physical Education as applied through public school teaching, but makes this application more relevant and consistent with the culture beyond the school environment. By directing our efforts toward the investigation and understanding of these responsibilities, rather than limiting them to the public schools, we will develop and extend our role in society. The Sport Science concept offers a better understanding of man by illuminating an area of his activity as yet uninvestigated, and provides the basic information for a series of new careers for our students.

Concepts can only be brought into focus and made functional by an accurate description clearly perceived. Such a description has been supplied by Thomas J. Sheehan. His operational definitions are broad enough to encompass the whole spectrum of sport yet definitive enough to establish clear perimeters.[20]

> *Sport* is defined "as the act of vying-physio-cognitive behavior against an obstacle in a competitively structured, institutionalized situation. This obstacle may take the form of another individual(s) possessive of physio-cognitive behavior, an inanimate obstacle, or an animated obstacle. This definition encompasses sport from fishing to football."

A clearer understanding of the definition lies in an explanation of the meaning of the important terms.

A. *Physio-cognitive* refers to the total physical, mental, and emotional responses of man, thereby, eliminating cards or table games.

B. *Institution* is used in the sociological sense and refers to man's establishment of socially acceptable organization for supplying some persistent needs or want.

C. When an institution is *structured*, it refers to a pattern of techniques, literature, and equipment that is an integral part of the institution. Football, for instance, is a highly structured social institution that has specialized techniques, rules, officials, playing fields, equipment, stadia, terminology, literature, and organization. On the other hand, jogging as an emerging sport is just developing patterns of participation, literature, and standards. In contrast, walking home from the office because one wants to, or the movement of a typist or bank cashier as they go about their business is not a structured institution of this type.

D. *Competitive* refers to the desire of man to excel.

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[19] Bookwalter and VanderZwaag, *op. cit.*

[20] Sheehan, *op. cit.*

Sport Science, therefore, is the study of man as he develops and participates in the social institutions that supply his varied needs and wants for competitive physio-cognitive behavior.

A diagramatic sketch may be of value here in conceptualizing the extension of Physical Education out into the culture and in identifying the position of the sub-discipline in the whole relationship.

SPORT SCIENCE

Its Relationship to Physical Education
and its Supporting Sub-disciplines

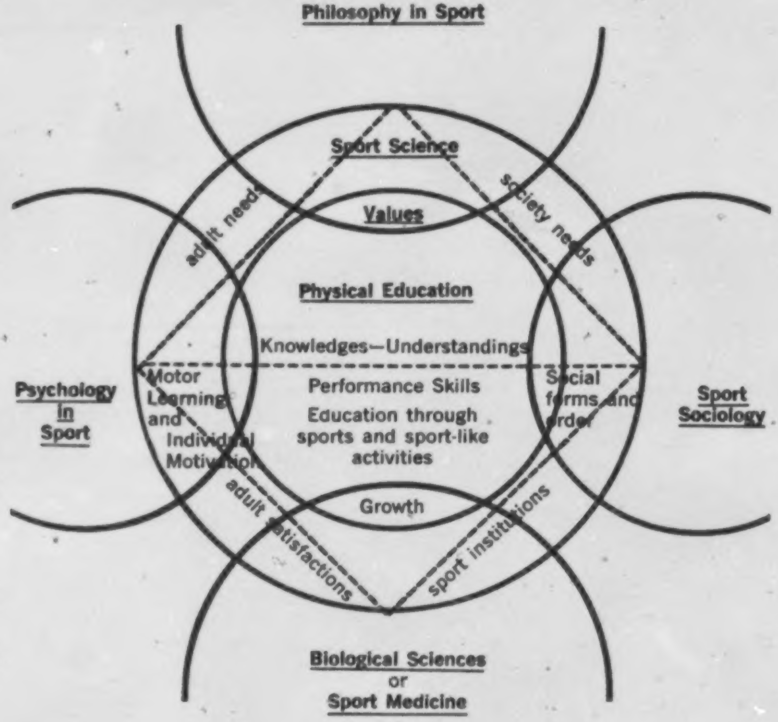
Philosophy in Sport
Sport Science
adult needs
society needs
Values
Physical Education
Knowledges—Understandings
Psychology in Sport
Motor Learning and Individual Motivation
Performance Skills
Education through sports and sport-like activities
Social forms and order
Sport Sociology
adult satisfactions
Growth
sport institutions
Biological Sciences or Sport Medicine

Figure 1. Sport Science, which is represented by the larger circle, encompasses Physical Education, indicated by the smaller circle, from which it develops. The triangle represents the performance skills or laboratory area. The four subdisciplines from which Sport Science draws are also indicated.

The Sport Science concept is somewhat analogous to the discipline of Economic and Political Science that study man in reference to his economic and political institutions. In this new concept a cross sectional approach is utilized in which biology, sociology, psychology, and the philosophical aspects of man are synthesized for a more complete understanding of man and his behavior, rather than an in-depth study of any single area.[21] Consequently, the broader viewpoint of the study of man increases the importance of the behavioral sciences.

A diagramatic sketch may be of value here in conceptualizing the extension of Physical Education out into the culture and in identifying the position of the sub-discipline in the whole relationship.

The Course of Study

The Course of study begins with the broad perspectives of biology, psychology, sociology, and philosophy for our field, plus classes in the laboratory analysis of sports, followed by a more specific elective program.

Physical Education, Sport Science Focus (30 C. H.)
(For Men and Women)

Core (15 C. H.)

Biological Perspectives	3 C. H.
Psychological Perspectives	3 C. H.
Sociological Perspectives	3 C. H.
Philosophical Perspectives	3 C. H.
Seminar in Core Perspectives	3 C. H.

Laboratory Analysis Courses (6 C. H.)

Team Sports	3 C. H.
Lifetime Sports	2 C. H.
Aquatics and Gymnastics	1 C. H.

Sport Science Electives

Biological	
Physiology in Sport	3 C. H.
Mechanical Analysis in Sport	3 C. H.
Sports Medicine	3 C. H.
Sociological	
Sociology in Sport	3 C. H.
Socio-anthropological History of Sport	3 C. H.
Philosophical	
Philosophy in Sport	3 C. H.
Psychological Psychology in Sport	3 C. H.
Motor Learning	3 C. H.

Students majoring in the program may elect to use this body of knowledge in a variety of professional career possibilities.

1) Careers in teaching Physical Education in the public schools will require an additional 24 credit hour certification program; an estimated 85% of the majors will select this area.
2) A minor in the Administration of Professional Sport is now being developed at Brockport that will prepare majors for positions of administrator in large public stadia, arenas, and other sport facilities.

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[21] Franklin Henry, "Physical Education—An Academic Discipline," Proceeding, *National College Physical Education Association for Men*, 1964, Dallas, Texas.

COLLEGE CURRICULUM ORGANIZATIONAL PLAN

Sport Science Focus Plus Possible Options

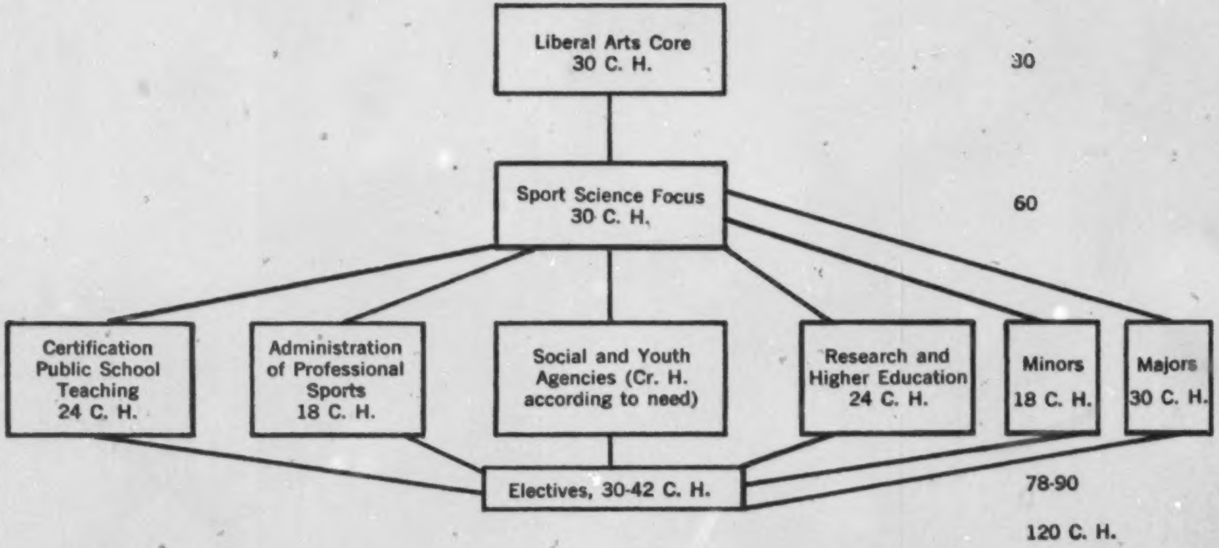
Liberal Arts Core
30 C. H.
30
Sport Science Focus
30 C. H.
60
Certification Public School Teaching 24 C. H.
Administration of Professional Sports 18 C. H.
Social and Youth Agencies (Cr. H. according to need)
Research and Higher Education 24 C. H.
Minors 18 C. H.
Majors 30 C. H.
Electives, 30-42 C. H.
78-90
120 C. H.

Figure 2 indicates the various elective possibilities and combinations that students may utilize in preparation for a variety of professional careers in the sports field.

3) Careers in Social and Youth Agencies for majors who prefer to work in a wide variety of charitable, city, state, or federal programs with inner city, migrant, or youth agencies are another possibility. Additional courses in Psychology, Sociology, Urban Studies, and Black Studies programs may be elected by the major students.
4) Careers in Research and College Teaching are two closely related areas of additional specialization; however, majors selecting this field should be prepared to continue on for their Master's Degree immediately after completing their undergraduate program.
5) Careers as Sport Publicist would require the major student to combine the areas of English and Speech for adequate preparation in this field.

It should be apparent that this broader approach lends itself to a whole series of possible professional applications within our society.

Conclusions

The new Physical Education curriculum based on the Sport Science concept instituted by the Men's Physical Education Department at Brockport has great promise for those who are interested in studying the sport phenomena of our society and in preparing for a variety of careers in this field. Further experimentation and subsequent changes in the program are expected as faculty and students develop investigative techniques and knowledge of this field and its meaning for man and society.

The Public School: A Partner in Teacher Preparation

John Hendrix, Edward Coates, Charles Mand
The Ohio State University

It certainly is no secret that the public school system is being challenged in this country today. Some such as Peter Schrag, who appeals to a rather substantial and influential audience through the pages of *Saturday Review,* suggest that the entire concept of a "common school" as a melting pot, as a vehicle for social progress in a pluralistic society, is not working and requires radical change. Kenneth B. Clark believes that Black ghetto children are not learning because of poor teaching and prejudiced teachers' attitudes. He will not accept the concept of racial inferiority as the reason for black students' lack of progress in the cognitive domain. Nor will he accept the rationale that this lack of accomplishment is the result of cultural disadvantages. The teacher and the school must bear part of the burden in his opinion.

Certainly throughout the country the failure of bond issues and operating levies bears additional testament to the fact that schools, teachers and programs are not satisfying and fulfilling the needs of our society. Undoubtedly there are reasons for some of the failures beyond the scope of the schools' abilities to foster change. Also, some of the critics who charge social failure today led the legions in the past Sputnik era who deplored the time wasted on such matters as "family life education" or "sharing" in the elementary grades. Many who trampled on John Dewey a few years ago are in the vanguard of those who, today, seek to exhume him. Yet, some of us, responsible for one aspect of the process of education in this country, the preparation of teachers, are not satisfied either. We listen to the criticism but in many cases it merely amplifies the existing dissatisfaction surrounding the preparation of a physical education teacher.

The dissatisfaction stems from the fact that we continue to focus on subject matter content as the major consideration in preparing a teacher. This emphasis on subject content presumes that the significant relationship for a prospective teacher occurs between the university and the prospective teacher and a less important relationship occurs between the prospective teacher and the school pupil and his community. To a great degree we are subject rather than people oriented, more interested in content than experience.

The debate about what sort of content is necessary for a physical education teacher revolves about the amount and type of skill experiences, or how much chemistry, physiology or mechanics in relation to psychology and sociology. On another level we accept as part of the conventional wisdom that fifty percent of the four year college program will be general education and the remainder, professional education. That general education is of course to be satisfied by certain university courses.

Recently new dimensions have been added to the examination of the content core. Henry, Daniels, Larsen and others have attempted to reorganize the content to provide for a general core of content necessary for all teachers and a specialized core which relates to specific professional goals such as athletic coaching, elementary physical education, the handicapped, and others. An even more novel reorganization of subject matter has occurred in a few schools which attempt to relate all content to the umbrella of human movement.

In all circumstances, some practical experiences are included in the curriculum, usually culminating in a major block of time for student teaching. In most of these circumstances the field experience complements or supplements the subject content. It is used to bridge the gap between theory and practice.

The amount of the field experience, its progressive nature, and the function of the local school in helping to design experience is very limited in comparison to the energies expended on other aspects of the curriculum. This seems true even in the climate of social change permeating the country. The new efforts in preparing a physical educator, whether oriented to movement or the core, plus areas of specialization, seems to emphasize the universities' traditional role.

The general overtone of teacher preparation today maximizes the function of the university, the professor, and the acquisition of information about exercise, sport skills, history, mechanics and other similar subjects. This overtone also minimizes the role of field experience, the prospective teacher, the function of the local school, the community forces influencing the pupil and also the child.

We suggest to an eighteen year old student something of the following: Come to the university and become a physical education teacher. We'll provide as much breadth and depth of information as is possible to offer. Your task, upon graduation, is to reduce or translate this information to fifth graders, eleventh grade students, girls, boys, perhaps the handicapped youngster, black, white, rich and poor.

This is almost an arrogant assumption on the part of the university relative to prospective teachers. Basically, this orientation to subject matter and university role is unfair and unrealistic. We say in effect, as a result of minimal and late field experiences, that the eighteen to twenty-two year old does not know enough to work with youngsters without rather extensive preparation from the university. Is this a valid assumption? It seems doubtful, since many attracted to physical education are the result of experiences with social agencies, recreation departments and church groups. In these organizations the prospective teacher has been responsible for children in a variety of settings for extended periods of time and, in some cases, has assumed twenty-four hour involvement.

Further, since we use the local school as our laboratory for field experience, it seems obvious that school personnel could contribute a great amount to the planning and direction of the experience. Unfortunately, the university has not been very receptive to relationships with the public schools. Certainly the relationship in the field of medicine with respect to the practicing physician as clinical professor and the use of the local hospital for training purposes provides a better example of combining theory and practice.

If we truly seek a new pattern of teacher preparation, it must include more field experience, greater participation by practicing, experienced teachers, and a rededication to university - school - community cooperation.

The following advantages of an experiential curriculum emphasis using the local school as a partner in preparation of physical educators seem important to mention—

1) The prospective teacher assumes an adult role through his field experience, thus increasing involvement and accountability.
2) The local school shares the responsibility for preparing future teachers. Its resources are a welcome addition to the "ivory tower" of the university.
3) A formal arrangement permits an exchange of university and local school personnel for retraining and resensitizing.
4) The technique of pushing the prospective teacher to the school and the community provides an opportunity to learn about forces at work in the community, the procedures to create change in schools, and to learn something of children, their fears, aspirations, costumes, disguises and desires.

The efforts to blend more experience for prospective teachers with the traditional subject matter orientation at Ohio State University has been prompted by several factors. The first of these factors is that the University is surrounded by four distinct neighborhoods, each of which contributes to the development of a teacher. One neighborhood includes almost all Black people. It is typically an inner-city ghetto. The children respond to a matriarchal environment. There is high unemployment, a high crime rate, associated with drugs, and growing militant efforts to change institutions such as the school. A second neighborhood can be classified as Appalachian white. It is a highly mobile neighborhood, populated by people from Southern Ohio, Eastern Kentucky, and West Virginia, who seek new economic opportunity. A typical teacher faces a 100% turnover in class, twice a year in this area. Contiguous with these areas of the city, although separated by a throughway, is a very stable, predominantly white neighborhood. Little crowding exists in the schools and the community values education for its youngsters. This is the first school district with which a formal agreement was established to prepare teachers. The fourth neighborhood bordering the campus is a white, suburban, upper middle class area, very affluent, with great pressures for the "right college for its youngsters," and suffering to some extent from growth and mobility.

These rather distinct areas surrounding the campus provide a simple access to tremendously varying experiences for students.

A second major factor in causing change in the traditional pattern of teacher preparation are the prospective teachers in our program. These young people want to be of service now, not three or four years later. They are students seeking to go to work, to avoid the malaise of "prolonged adolescence" so often associated with college life.

Finally, the third and perhaps most important factor in institution of change, was the willingness of the faculty to accept change. It was necessary to restructure traditional roles relative to students and local schools.

The implementation of this concept at The Ohio State University followed an obvious sequence. Initial energies concentrated on the formulation of a feasible plan. Finding a desirable school district which would cooperate constituted the second step. Activating the plan for a trial period of time came next. And of course evaluation and subsequent refinement followed.

Providing The Ohio State University students majoring in physical education an early field experience represented the central emphasis of the plan. Specifically members of a Methods of Teaching Physical Education (Physical Education 647 in our program) would teach secondary school youth in an actual school setting; they would instruct a small group of students in a unit of instruction as a practical aspect of their course requirement. Their responsibility would include planning units of instruction, preparing daily lesson plans, teaching an activity for a six week period of time, providing class leadership, and evaluating student progress. The plan, in addition, called for the involvement and interplay of other key participants. Two student teachers assigned to the same school for a considerable time prior to the arrival of the University methods students would operate in a routine manner in the first phase of their experience. As the Methods students took over the teaching functions in the subdivided groups, the student teachers would coordinate the whole class and, in some instances, teach in small groups.

The plan called for the University instructor of the Physical Education 647 class to enter into a part-time, no-pay contract as a member of the public school faculty. He would assume full legal responsibility for certain physical education classes in the school and supervise both the student teachers and the instructors of the small groups. The physical education instructor of the school, as a contracted clinical instructor at Ohio State would go to the University campus to contribute his practical expertise in certain classes in the major curriculum and conduct small seminars with other major students. The high school student taking physical education, sub-divided within their normal class, would be taught by University major students for a six weeks grading period.

The selection of a desirable school for the project represented the next significant problem. The following criteria were established for an appropriate location: (1) a cooperative, innovative school administration, (2) a sound on-going physical education program, (3) competent, resourceful physical educators in the school, (4) adequate physical education facilities with multiple teaching stations, (5) a stable school population with minimal discipline problems, and (6) close proximity to the University community.

Grandview Heights High School met all of our standards. The Community of Grandview Heights, a suburb of Columbus, has city limits almost contiguous to The Ohio State University campus. The corporate boundaries of Columbus and other suburban communities completely surround Grandview Heights thus negating any area expansion. The stable population of Grandview is basically middle class: religious division is approximately 65% Protestant and 35% Catholic. Virtually no religious or racial minorities live in Grandview Heights. Physical education and school athletics occupy a respected niche in the total school offerings, and the two male physical educators are competent, respected professionals. Their facilities are adequate, though modest, and provide several teaching stations necessary to the small group concept. The Superintendent of Schools and the Principal were enthusiastic and immediately endorsed our idea. The School Board quickly approved it.

Fruition of the plan came in the Spring Quarter of 1970. Refining the original rough plan and negotiating details consumed considerable time. Actually, it proved less irksome or complicated than anticipated, due to the mutual cooperation and enthusiasm of both Grandview personnel and the School of Physical Education back on campus. Administrative problems included such mundane details as coordinating University students' schedules with school class schedules at Grandview, securing rides to and from the University, improvising locker space for University students, finding parking space, complying with the school dress code, procuring University equipment for use in the classes, and many others. Obtaining state certification for the University faculty member and signing the high school teacher to a University contract offered some interesting sidelights. Curricular decisions also posed problems. Obviously, the activities taught in the small groups should enhance the normal school offerings. Golf, tennis, trampolining, and wrestling were selected. These conformed to the small group concept, University students were competent to teach them, and they were not normally included in the curriculum. The University furnished equipment for tennis and golf not owned by the school. The one trampoline owned by Grandview made that activity inappropriate for full sized classes, but desirable in small groups, and wrestling was not offered at all in the routine curriculum. The high school student had the opportunity to choose the activity he preferred.

Two physical education major students began their student teaching experience at Grandview at the start of the University's Spring Quarter. This coincided with the beginning of the third week of a unit of instruction at Grandview. They observed, assisted and eventually took charge of the fourteen physical education classes for boys. Each class met twice a week for 52 minutes per session. During this time the 24 members of the Methods of Teaching Physical Education course attended classes on campus covering materials designed to prepare them for their experience in the high school.

Beginning with the fifth week of the Quarter (and the start of a new grading period at Grandview) four University Methods students became responsible for instructing a class in the high school. Each would be assigned to teach either golf, tennis, wrestling, or trampoline to their assigned sub-unit. Thus six classes with four teachers each were involved in this project. The other eight classes at Grandview continued to operate in the normal fashion. For the next six weeks the methods student planned, taught and evaluated this group of students. During this period of time they fulfilled other assignments, but met only occasionally on campus. They were required to present a case study of one of their students being assisted in this task by use of the cumulative health records and the school's confidential file. They observed their colleagues in other classes who taught the same activity and those who taught other activities. They completed certain reading assignments. And they participated in critiquing sessions after each teaching performance.

The University instructor supervised every class which was involved in the project. After each one he conducted a fifteen to twenty minute critique with the four teachers, the student teacher if he was available, and the school's teacher if he were present. After the second week these critiques included a video tape play-back of the student's performance. Usually the student teacher performed the technical functions of taping. Routinely he taped about 5 to 7 minutes of each of the small group instructors.

The Methods students benefited in addition to our planned experience by having the opportunity to talk informally with members of the Grandview teaching staff, the athletic director, and the principal. They observed in other aspects of the school operation, conferred with other colleagues and in all gained a good overview of the School's operation.

Evaluation through questionnaire and interviews confirmed the merit of the Spring experiment. Grandview students and the University Methods' students completed separate questionnaires; student teachers, the high school physical education teachers, principal, superintendent and all involved University personnel submitted to in-depth interviews. All indications were overwhelmingly in favor of continuing the project in the Fall of 1970.

The original concept involved the participation of the Women's Division of Physical Education at Ohio State and the teaching of girls at Grandview. Due to administrative problems, and not philosophical ones, only the men taught in the Spring. Plans for the Autumn Quarter integrated the project and even included some co-educational classes. Again, administrative factors negated the joint venture. During the Autumn Quarter the project continued for men only.

Minor adjustments and refinements smoothed the operation and made it more productive. Again, at the end of the quarter, evaluative techniques suggested strongly that the project continue and become a permanent and integral feature of the physical education program at Grandview and the preparation of physical educators at The Ohio State University.

The initial concern of the administrative personnel related to secondary school student reaction and learning. The boys indicated strong support for the opportunity to elect from a group of activities which offered variations from the normal program. They were favorable to instruction from young, developing teachers and developed meaningful rapport with them. The great majority felt that individual learning was considerably greater during this period than in traditional classes. Of prime importance is the finding that, from all the questionnaires tabulated, there was no single expression of disappointment or rejection of the project. Clearly, the pupil reaction had shown that learning opportunities had been positively enhanced.

Understandably, the teachers at Grandview Heights were placed in a difficult role. In effect, it was necessary for them to relinquish much of the teaching formerly delegated to them. Simultaneously, a Grandview teacher under joint appointment assumed responsibilities in the seminars and classes at the University.

The positive, cooperative response from the teachers attributed strongly to the attained results. The Grandview teacher was initially apprehensive relative to contributions he might make in teacher preparation courses at the University. After several weeks indoctrination, he was pleasantly surprised to discover that there were many student concerns to which he could bring understanding and reason to the prospective teachers. This phase of the total plan would consistently improve in effectiveness as the cooperating teacher developed familiarity with the University community and also with the specific courses and seminars which would fall within his responsibilities. The ability of this individual to bridge the gap between the "theory" of the University and "practice" at the school can be a great asset to teacher education.

Initiation of innovations which include University/School/Community cooperation is dependent upon careful administrative planning at each source. It is necessary that all individual staff members who must assume direct involvement in the school and university have legal protection and authority for all necessary responsibilities at both institutions. This authority must be properly interpreted to students, teachers, and the public.

Administrative problems were negligible during this quarter. Careful planning and full cooperation were exhibited throughout. However, there must be continual attention to purpose and interpretation by a concerned administrative staff for each subsequent quarter. This attention to detail must continue to generate an atmosphere of mutual benefit and cooperation.

The original purpose of the experiment was to furnish a realistic opportunity for prospective teachers to receive an early field experience in a school setting. Unless evidence could reveal significant improvement in upgrading the laboratory phase of the methods course, there would be no substantive reason, from the University viewpoint, for a permanent implementation of the plan.

Throughout the quarter, the enthusiasm for direct involvement at the school by methods students was clearly evident. Each student taught a squad of boys for six weeks. A total of twelve full periods were available for teaching and this represented a vast improvement over prior teaching experience. More important, there was ample opportunity to develop meaningful relations with secondary school students and to study the growth and development of these young men. Short, meaningful seminars after class brought real understanding to classroom happenings. Video taping and instant replay revealed strengths and weaknesses in the individual teaching techniques.

Growth as a teacher was clearly evident during the period. The class members unanimously agreed that the value of the new laboratory sessions was extremely rewarding and should be incorporated permanently.

The evaluation of the role of the student teacher was equally favorable. In assigning student teachers to the project, it was crucial that they receive an experience which would be comparable to that in a routine student teacher assignment. At the same time, new roles were anticipated which might make this innovation even more appropriate as a culminating experience.

In the past there was reluctance to place two student teachers with the same class and supervisor simultaneously because of individual differences. Also, there was an awareness of the constant "comparison" by secondary school students when taught by different personalities.

There were no problems which developed because of the nature of the assignment. Several factors might be noted which assisted in preventing differences. First, student teachers receive a "satisfactory" or "unsatisfactory" grade for student teaching rather than the traditional grade. Second, the assignment of the student teacher to specific classes made it positively clear who was the designated primary teacher for the class. The two factors made for a definite cooperative environment with the men rather than a competitive situation.

There was another concern which was raised initially relative to student teacher assignment. Many of the tasks of the student teacher in the experimental classes concerned organization and administration. Actual teaching opportunities for the men were less than in a typical assignment since methods class teachers functioned inside of the class structure. This situation was rectified by rearranging afternoon classes to allow for the men to have full responsibilities for teaching at this time.

The development of the student teachers through the quarter gave ample evidence that the varied roles were met as a real challenge. Although neophyte teachers in their own right, each had to organize and administer a program, to develop rapport with the secondary school students, to work with his peers from the methods class, and to establish a workable relationship with the cooperating teacher and his college supervisor. Such an assignment might sound like an overwhelming task. However, the effectiveness of the total project is dependent upon the abilities of the total group to work as a cohesive unit. There is an abundance of support and assistance when needed.

From observations of cooperating personnel and conversations with the two student teachers, together with the enthusiasm exhibited by the men in meeting the challenge, the participation as a student teacher under this new concept must be considered a substantial improvement from traditional student teaching. As a result of this undertaking, new approaches for the assignment of student teachers using a team approach are emanating.

Advantages of the new venture are summarized as follows:

1) The college supervisor returned to the secondary school to work with public school students. He was able to closely supervise methods students throughout the quarter.
2) The public school physical education teacher returned to the campus to gain familiarity with the teacher preparation curriculum and to provide instruction to undergraduates.
3) Methods class members have gained initial teaching experience in a typical school setting with small teachable groups.
4) The public school students have received small group instruction in elected skills with young, eager teachers.
5) The greatest benefit may well be that the avenues of communication have been opened between the teacher training institution and the public school.

There are significant ramifications which are emerging from the project.

The concept of University /School cooperation will undoubtedly be projected into a more comprehensive undertaking. The favorable community attitude has developed an enthusiasm among participants which has generated a sincere desire for additional involvement. Such increased participation will mutually benefit teacher preparation at the University and the people of the participating community. Several short range goals are already developing.

The women's division of the University is instituting a preliminary program with plans for eventual participation on a full scale basis. Cooperation of both men and women can provide for new forms of University supervision which could reduce overall expenditures. It will open up new co-educational activities which might significantly alter the school long range curriculum.

Another immediate benefit is the desire of the men to seek additional field work at the school. The security derived from familiarity with a particular situation has prompted individuals to assume direction of the noon hour intramural program and to assist in athletic coaching.

In the community the recreation program is closely allied to the board of education. The recreation director is a doctoral candidate at the University. The working relationships established in the original enterprise will afford an easy break-through for recreation and physical education majors to gain additional teaching in a favorable environment.

In an endeavor to insure diversified field experiences in various settings, the next development can logically be the establishment of similar projects in inner city schools and suburban schools. Such an arrangement would allow the undergraduate to gain familiarity with the inner city, surburb, and average school communities and allow for early selection of the kind of school in which they would like to seek employment.

BASIC INSTRUCTION

New Curriculum Perspectives or the Chameleon's Dish

Barry C. Pelton
University of Houston

The Sixties Taught Us A Lot

Ten years ago all publics in American life were eagerly talking about the prospects for the "Soaring Sixties." Well, we have had them. We soared to the moon, we soared to record levels of prosperity, we soared to new highs of crime levels and civil chaos, and we soared to new highs in negating individual responsibility.

Perhaps 100 years from now the decade just ended will be referred to as "The Learning Sixties." Admittedly, in all professional fields we have charged up blind alleys and dead-end streets. We have seen a number of smug and fashionable theories sag and crack. We have in many instances been jolted out of much unjustified complacency.

At the moment we may have more questions than answers. This need not produce dismay, for surely answer-finding needs the questions first. Questions ranging from birth control to ecology have been raised leading one to hypothesize if civilization is in a sense a trial and error process, it is discouraging that we all too often repeat old errors.

At any rate, at the threshold of the 1970's we find ourselves living in a uniquely exciting if not terrifying age. The pace of change shakes the certainties in our familiar worlds.

Such prospects are disquieting simply because they force us to think of human possibilities that have hardly been imagined. True, space technicians conquered those elements leading to the Apollo moon landing, but Apollo missions are also realistic for engineers, lawyers, politicians, religious leaders, administrators, and most certainly educational leaders.

Curriculum for the 1970's
or
The Impending Instructional Revolution

My intent in the following comments is to highlight some educated guesses concerning needed changes and prospects in instruction in the decade ahead. My crystal ball is no clearer than yours at the moment and by choice my interest is succinct, namely, the Basic Instruction Program of collegiate physical education.

The task of briefly considering concepts which concern students in higher education and specifically physical education is not an easy one due to the voluminous amount of material for review. Nonetheless, if we share the belief that we may be on the verge of a breakthrough in the history of learning and teaching[1] and that opportunities for change may be too ambiguous and squandered, as others before us have done, sensible optimists would not attempt the mission without clearly identifying it as a dream of possibility and not, at this time, a complete reality.

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[1] Bardwell L. Smith, "Educational Trends in the Seventies," *AAUP Bulletin* (Summer Issue, 1970), 130-136.

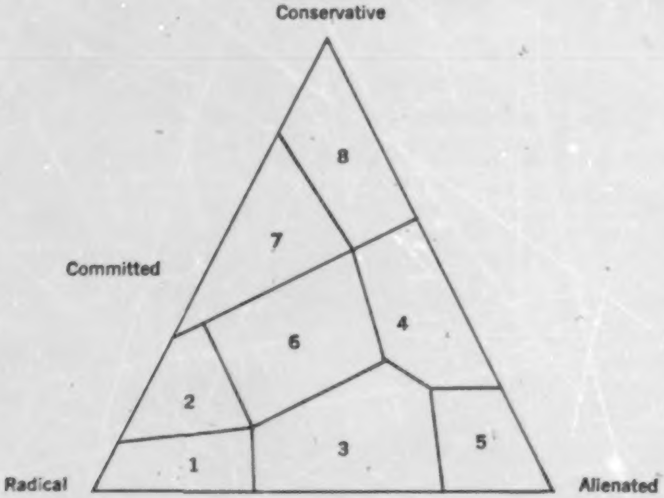
The tension which began to be registered in the closing years of the sixties, was expressed symptomatically in the cries for "relevance."[2] Students at all levels, but particularly in higher education, were particularly critical of established educational practice which implied "requirement" but little "recompense."

There is a need to develop education programs which assist young men and women as they examine their most basic assumptions about the world, and specifically for our purpose, their educational world. Further we need the kind of educational relevance that would assist these same young men and women in bringing about change, which would produce the kind of educational world which is needed and preferred.

In order to achieve this kind of relevance, teachers of collegiate physical education must familiarize themselves with the thought patterns of college-age students—their attitudes, values, beliefs, interests, and capacities in a physical education setting. This requires teachers (and anyone connected with the development and conduct of the Basic Instruction Program of physical education) to look closely at the probable constituency of student populations on college and university campuses today.

Havighurst[3] suggests the following schematic breakdown of college and university students:

VARIETIES OF YOUTH



Per Cent	Category
5	1. Radical Activists (New Left)
15	2. Concerned Liberals
10	3. Hippies and Yippies
10	4. Uncommitted
5	5. Amoral Hostiles
35	6. Common Man Complacents-Squares
15	7. Concerned Conservatives
5	8. Reactionary Activists

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[2] Lawrence E. Metcalf and Maurice P. Hunt, "Relevance and the Curriculum," *Phi Delta Kappan*, Vol. VI, No. 7 (March, 1970), 358-361.

[3] Robert J. Havighurst, *Issues in American Education* (Oxford University Press, 1970).

An already popular parallel to the cry for *relevance* in the sixties is the term *accountability* for the seventies. Darland[4] believes that the teaching profession is systematically moving toward the self-governance machinery and processes necessary to achieve accountability on the part of teachers.

Surely the time is at hand to study all aspects of teaching at our institutions of higher education. The present demand for accountability may evolve into a blessing. Students are becoming increasingly more wise in the ways of learning and what they should learn. Hence, the demand for greater sophistication on the part of teachers and seemingly on the part of teachers in the Basic Instruction Program of Physical Education is pressuring us to look for innovation in the teaching and learning process.

What's New for Collegiate Physical Education?

Proposals emanating perhaps from the team teaching concept to the popular competency or performance based process of teaching represents the gamut of developments.

Physical education has not overlooked these developments. Logan and McKinney[5] suggested the use of team teaching and the use of multi-media techniques as means by which teaching in the Basic Instruction Program might be improved. Nixon[6] and Jewett[7] made significant mention of needed reform in curriculum and drew implications from general curriculum theory for physical education, and Penman[8] suggested that programmed instruction had relevance as a means of presenting physical education concepts.

Re-Ordering Goals and Roles
or
Teacher, May I Take Four Giant Steps Forward?

My comments today are not meant to suggest a radical departure from all that has been done or is being planned for our Basic Instruction Programs but I am suggesting a qualitatively different series of emphases which in combination might comprise a significantly new beginning.

It seems clearly before us in the 1970's how paradoxically limiting our educational approaches have often been. Historically, we might muse over the whim—I (college physical education) am 109 years old, I am as clever as ever, or even more whimsical—if the United States Sputnik had been launched three weeks earlier, i.e., prior to that of the Russians, wherefore curriculum reform?

I should be the first to decry fallacious logic, spurious logic, deceptive sloganeering, and superficial bandwagoneering which characterize the pronouncements of some educational fetishist.

But, as we encounter students each day who are asking:

1) "Who am I?" (self-identity)
2) "What am I doing?" (self-orientation)
3) "Where am I going?" (life's goals)

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[4] D. D. Darland, "The Profession's Quest for Responsibility and Accountability," *Phi Delta Kappan*, Vol. LII, No. 1 (September, 1970), 41-44.

[5] Gene A. Logan and Wayne C. McKinney, "Team Teaching and Multi-Media Techniques to Challenge the Intellect of the General College Student," Presented: American Association of HPER, Dallas, Texas, March, 1965. Unpublished.

[6] John E. Nixon, "Needed Curriculum Reform," *The Academy Papers*, NCPEAM and NAPECW, No. 3 (1969).

[7] Ann B. Jewett, "Implications from Curriculum Theory for Physical Education," *The Academy Papers*, NCPEAM and NAPECW, No. 3 (1969).

[8] Kenneth A. Penman, "Programmed Instruction for Basic Physical Education Courses," *NCPEAM Proceedings* (1965), 93-95.

I should like to propose *Four Giant Steps*.

1) Initiate a specific area in your graduate programs which provides professional preparation for prospective teachers in the Basic Instruction Program.

2) With the projected increase of Ph.D.'s and Ed.D.'s by the end of the decade, add status to this program by recruiting professional young men and women whose special interests and talents lie in this area and who are committed to teach there with the same competence, enthusiasm and permanency as any other area of the professional program of physical education.

3) Concentrate on ridding this instructional area of that stigma created by those unrequiting terms "required" and "service." Emphasize instructional excellence tailored to individuals and not masses.

4) Consider, if you will, innovative approaches to teaching in this program.

At this point I am reminded of a quote by Emerson . . . "If only people would be like the man riding, who, losing his way let the reins fall on the horses neck . . . the right path was found."

So, I'd like to drop the reins and indulge upon your talents and ask you to consider a performance or competency based model of teaching which, even though not developed specifically for physical education, I believe has particular implications for the teaching and learning process in the Basic Instruction Program of Physical Education.

After consideration of the presentation, I should like for us to *brainstorm* in hopes that something will be *born*, hence rescuing us from the dilemma described by Arnold when he said, "Wandering between two worlds" (paraphrase: one perhaps dying and the other powerless to be born). Certainly there is promise in what our new educational generation has to offer, a promise poetically and sensuously adumbrated in the lyrics of the lead song in the musical "Hair."

Harmony and understanding
Sympathy and trust abounding
No more falsehoods or derisions;
Golden living dreams of visions
Mystic crystal revelation
And the mind's true liberation
Aquarius . . . Aquarius . . . Aquarius . . .

Self-Prescribed Fitness: Attitude Change Through Innovation in a Basic Program*

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Robert J. Beck
University of Illinois
Chicago Circle

The University of Illinois at Chicago Circle now has in operation an instructional system which supports instructors of a required service program in providing the conceptual component of physical fitness instruction to approximately 2,000 students each year. The supporting materials in use in our system have been developed and evaluated over the past three years. They include twelve audiotape and color slide "lectures" varying from six to twenty-five minutes in length, each keyed to a course outline (Beck, Feingold, & Tiemann, 1969)—a modified workbook format which the student uses as he responds actively to the instruction. The materials which are a major component of the instructional system are used in the gym spaces, with a portion of each class devoted to activity.

We will briefly review how the system was developed specifically to influence student attitude toward physical fitness and how the system supports instructors, enabling them to maintain a concern for each individual student as the central aspect of their instruction. We will review representative segments of the instruction and the data generated by the students which indicate the level of effectiveness of the system.

Development of the system began as a proposal for funding in order to prepare an audiovisual introduction for the existing basic course at the University. Robert J. Beck and Ronald S. Feingold, representing Physical Education, and Philip W. Tiemann, Head of the Course Development Division of the Office of Instructional Resources, continued discussion of the initial proposal and a larger project began to emerge. The project expanded because Beck and Feingold became interested in performance objectives and criterion testing as a basis for rational instruction planning.

These basic ideas had been formalized in a film *Programing Is A Process: An Introduction to Instructional Technology* (Markle & Tiemann, 1967). Essentially,the programing process was followed in developing all materials employed in our instructional system. Here is a brief review of the process, as represented in Figure 1.

First, the goals of instruction are defined in detail in terms of specific instructional objectives expressed as expected student performance. Next, a series of written and performance tests are developed which must be an acceptable test of the specified objectives—the criterion performance of the student. Third, representative students are tested against the final criteria to see how much they already might know, i.e., what behaviors they are able to exhibit as they enter instruction. The difference between entry and goal is what we might call the instructional gap. The gap must be filled with the materials and procedures necessary to raise the student's level of achievement to the specific or criterion objectives. Many trials and revisions of instructional materials and procedures usually are required to arrive at the final stage.

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* A bibliography may be obtained from the authors upon request.

The first two years of development work on the system brought us to the fifth and final stage, i.e., data from final trials indicating that our instructional system enables students to demonstrate the skills and attitudes held as our instructional goals.

Each step of the model or process for rational development was applied to physical fitness. We began with specification of objectives. Anyone stating specific objectives usually finds that initial statements cover the obvious performances of students. Our preliminary list did just that, mentioning good form for a variety of cardiovascular and muscular activities.

Activity obviously is critical to any fitness program. Early in planning, we decided to hold all instruction in the gym spaces in our first trial in order to determine the feasibility of keeping activity as a central emphasis in our system. As finally developed, almost 240 minutes—about four hours—of twenty class meetings are spent in a "lecture" mode, with the remainder of time devoted to the conventional activity and organizational aspects of a basic course.

Of course, we continued to specify objectives and associated instruction strategies for physical activities. But something seemed to be missing. Our discussions of objective priorities kept returning to a general theme something like, "Well, running in good form (for example) is really not too important either, as long as the student will be more likely to continue working out after the course." It became obvious that our paramount objectives concerned student attitude toward physical fitness.

Course planning accelerated about this time with a boost provided by a marvelous catalyst, an early draft from Robert Mager setting forth the basic ideas of his subsequent book, *Developing Attitude Toward Learning* (1968). Mager argues that the universal objective must be to send the student away from instruction with a greater tendency to approach the subject than he had when he first came into contact with the subject.

Mager refers to the favorable situation—for example, a student's voluntary effort to seek out and enjoy more history—as SMAT's, subject matter approach tendencies. On the other hand, if—in the presence of history—the student works on math, or says "Yecch!" or falls asleep, or runs away, Mager suggests the term SMUT, a subject matter unapproach tendency.

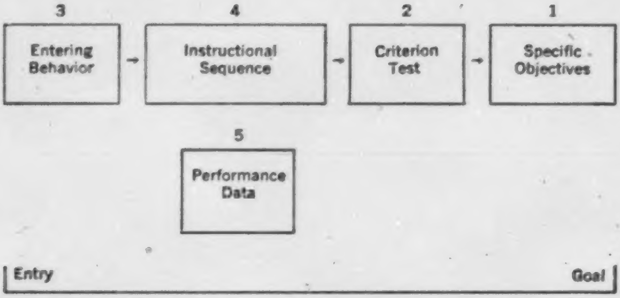

FIGURE 1. Products of the Five Instructional Programming Process Steps[1]

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[1] From Susan M. Markle & P. W. Tiemann. *Programming Is a Process: An Introduction to Instructional Technology.* Chicago: Office of Instructional Resources—Univ. of Illinois, 1967. (16mm film and accompanying handout).

The clarification in terms of increasing SMAT-producing events and decreasing SMUT-producing events certainly applied to the instructional system for physical fitness. We have applied Mager's suggestions throughout the system, to major as well as to relatively minor issues. For example, the materials consistently refer to *low* levels of fitness as opposed to *poor* levels of fitness—a minor issue which certainly will not change attitude, but such small issues tend to have a cumulative effect.

Naturally, we considered major issues. If a student perceives instructional materials and procedures to be individually relevant, we could anticipate more approach responses. Of course, most of us believe that physical education is one subject which may be readily adapted to individual differences among students. But we have to face the fact that completely individualized instruction may not be a realistic goal.

Suppose you've been taking individual lessons from the golf pro at $10 an hour—and really helping your game. One morning you are surprised to find yourself in a class of 40. The pro insists you'll pay only your share, but you know it's not likely you'll get even two-bits-worth of improvement. In this crowd, you know what *you're* missing.

What about the student in a class of 40 in the gym? Unfortunately, the closer the instructor approaches his true goals, the more the student will perceive a need for individual instruction. If he doesn't get what he needs, *that's* a SMUT-producing situation.

The instructor's situation is equally unfortunate. He knows what he could accomplish individually with each student, but he is confronted with the administrative reality of 40 students and he doesn't see any alternatives.

Notice that completely individualized instruction in golf is a possibility. As the consumer of the instruction, all *you* have to do is be handy with money. But completely individualized physical fitness instruction is not an administrative possibility, given the level of funding of today's schools. Here we are referring to basic programs and not to special adaptive sections or to very small classes, many of which can be individualized. We're referring to the case of the typical service program instructor whose administrator says, "Next week, these 40 students will be yours. Good luck!"

If we are to be concerned with student attitude, we know that the administrator's good luck wish should be directed to the student as well as to the instructor. And when designing an instructional system with the primary goal of influencing student attitude in a positive way, we must look for some form of support which provides the instructor with alternatives. At this point, we must consider educational philosophy with respect to student attitude and goals.

John Dewey, the educational philosopher, was deeply concerned with the relationship between means and ends, choosing to refer to educational goals as the ends-in-view. An approach to physical fitness which holds student attitude to be paramount should expose students to the relationships between the means and the ends—the latter being the goal of fitness itself—and thus keep the "means" of attaining the goal, i.e., the running, the muscular activities, and so forth, in proper perspective. A student who does not understand the relationship between means and ends may view all activity—the "means" by which the ends are achieved—as irrelevant. If so, the student may even come to detest all physical fitness activity *per se*.

So a concern for student attitude—approach behavior—must be reflected in decisions about *what* is taught to students as well as *how* instruction is presented. Our instructional system must be designed to support the instructor in presenting conceptual relationships within the subject matter of physical fitness as well as in guiding the activity of students.

From previous presentations to the Association, many of you may be familiar with conceptual approaches in physical education (Corbin, 1970; Johnson, 1970). We would like to present a somewhat precise definition of the term "concept" which is extremely useful in instructional design. Here is a summary from the program, *Really Understanding Concepts* (Markle & Tiemann, 1969), which serves to define "concept" in a precise sense useful to many learning psychologists.

We consider a concept to be a class or set of things which differ among themselves and yet which are treated as alike in some way. A typical example is the concept of "chair." Think of how many different kinds of chairs there are—overstuffed ones, straight-backed ones, ones with arms or rockers or swivel arrangements. There are those plastic bubbles in the mod shape and antiques in the art galleries. Despite the differences between all these things, a knowledgeable person generalizes—he treats them alike, calls them "chair."

People can tell the difference between one kind of chair and another, but the differences between kinds are irrelevant to their being chairs. More important, people who understand what a chair is can tell the difference between or discriminate between chairs and non-chairs. Show them a stool without a back, and you will get agreement that it is not a chair. Show them a love seat for two people and again you will get agreement that it is not a chair. The set of things we call "chairs" share certain critical attributes. If a critical attribute is lacking, the thing is not a chair.

A student who is learning a concept must be taught to generalize, i.e., to treat different objects as members of the same set, and to discriminate, i.e., to recognize non-examples as *not* belonging in the set. Real understanding lies in the student's demonstrated ability to generalize to examples he has never seen before and to discriminate new non-examples as not belonging. Too often, instruction that is claimed to be conceptual is really only verbal. The student learns to spout definitions, but wouldn't recognize what he was talking about in the real world if he were sitting on one.

Consider the concept of flexibility—a key concept in physical fitness. In our instruction, we want students to discriminate between instances of the concept "flexible joint" and of the parallel concept of "inflexible joint." When they demonstrate this performance capability, we have one bit of evidence that our instruction is effective or, stated another way, evidence that our students really understand flexibility.

Our analysis revealed that the concept "flexible joint" had a number of critical attributes, i.e., any instance of flexible joint will always find a joint moving through the total range of movement for a particular individual. That's critical to all cases. As an irrelevant attribute, it is irrelevant how gross the range of movement is, that is to say, people differ in the amount of possible movement which indicates flexibility for them.

Subject matter analysis reveals the basic physical fitness concepts to be cardiovascular endurance, muscular strength, and muscular endurance. Conceptually, physical fitness turns out to be quite complex because the concepts which students must master are not clear-cut and precise. They have what we might call fuzzy boundaries. An activity which we might class as an example of cardiovascular activity also would contribute something to muscular endurance—and, under certain conditions, to muscular strength.

Other key fitness concepts are difficult to teach conceptually because of complex attributes. In the case of flexibility, what we call paired attributes—the necessity for movement through the range of the joint but the fact that precise ranges differ across individuals—makes the design and development of effective instruction extremely difficult. Notice that it's not too difficult to have students commit to memory a *definition* of flexibility—but that's not our instructional objective.

At this point in instructional design, we have determined that activity for its own sake is not sufficient if we are to be concerned with student attitude. For this reason, we also considered concepts. A further consideration of individual student differences now forces us to move to a higher level of learning, one which some psychologists (for instance, see Gagné, 1970) refer to as "principles." Let's return to flexibility as a case in point.

The objective that students will understand flexibility, at an operational level with respect to their own joints, is merely what is called an interim objective—a means to another end. It is absolutely necessary that students grasp the concept of flexibility so that they will be able to understand the function of stretching exercises and use these exercises when appropriate.

Applications of such nature require students, on an individual basis, to apply principles of physical fitness. To the psychologist, a principle—or we might say a rule or a formula—expresses relationships between concepts. A principle is often characterized by a statement presented in the "If . . . , then . . ." fashion. For example, "If you need to increase flexibility of certain joints, then employ appropriate stretching exercises."

From the viewpoint of learning theory, the importance of individual student ability to apply basic principles once again raises the issue of relationships between means and ends. Just as it was not sufficient for students to engage in activity *per se*, it is not sufficient for students to understand basic principles unless they know *when* these principles should be applied in their own, individual fitness program

Once again, knowing when to apply the principles is a crucial, SMAT-producing skill. Conversely, if the student understands the principle but doesn't know when to apply it in his own case, that's a SMUT-producing situation. Thus, it is critical from an attitude consideration to provide instruction on principles—the relationships between concepts—which enables each individual to apply the basic principles to his own program.

If our instruction fails to provide students with such a capability, then the relationship between means and ends becomes obscure and instruction may be perceived as irrelevant. Individuals may appreciate *why* they are participating in a physical fitness activity and yet be completely dependent upon someone to prescribe activities for them.

The materials designed for our instructional system support the instructor in identifying physical fitness as uniquely individual, informing students that the level of fitness they choose to attain and how they choose to attain it—and even *if* they choose to attain any higher level—are decisions which no one else can make for them. Thus, instructors use the couse materials to provide students with a basis for decision; how to assess their physical fitness, how to improve it if they wish, and how to maintain any level they individually decide to be suitable for themselves. We refer to the approach as "self-prescribed fitness."

The conclusion of analysis requires decisions as to what components of the system will be assigned to which instructional functions. For instance, we had identified the instructor's key function to be a maximum amount of interaction with individual students. Given the administrative realities, we could not reduce class size to accomplish this function. Thus, the instructional materials must support him in this function.

The instructor's time must be devoted to individual, corrective feedback to a student attempting some activity as the instructor's function is to discriminate between examples of proper and improper form and advise the student. This is the essential, human element of instruction. No other component of the instructional system can perform this crucial task. Thus, no other component should interfere. Specifically, the instructor must not have to remediate for shortcomings in the conceptual component of instruction, the "lectures." If the system is optimum, there will be a minimum of questions such as, "Coach, I don't understand dilation." In fact, what we find in our system is a predominance of questions such as, "Coach, am I doing this right? Watch!"

Activity alone leads to instructional lockstep, as does conceptual instruction which fails to create "self-diagnosing" students, who are free to ask enlightened questions. The activity portions of classes appear to be disorganized, that is, students are each doing their own *thing*—there's no activity "by the numbers." But watch any *one* student and you see him go through warmup procedures, muscular routines, a cardiovascular program, and then into cooling down procedures. Our instructors report they have never been so free to provide information to students—and the students' questions are good ones.

The instructor does not have to teach by default, that is, the conceptual sequences are extremely effective. This is not surprising when you consider they have been tried out on real students and revised five times.

Format for the first trial employed duplicated student outlines with visuals sketched in margins. During lecture portions, students were "talked through" the outlines, which were subsequently collected and response data observed. The second draft was essentially the same with revised course outlines and visuals transferred to overhead transparencies. Again, revisions were made on the basis of student data.

In the third version, the "lectures" were tape-recorded and keyed to another revision of the course outline. Revised visuals presented by overhead transparencies also permitted the tape recorder to be stopped when student questions arose. Questions were noted and provided a basis for the fourth revision.

The fourth draft was shifted to color slide visuals and the audiotapes were completely revised. The student outline was formalized as a publication and about 2,000 students were instructed by the system, sixteen instructors providing suggestions for materials revision and changes in the new instructor guide. Scripts and slides have been revised for the fifth revision, an upgraded instructor guide has been prepared, and an additional 2,000 students are proceeding through the fifth draft of instruction this year.

At this point, we would like to present a very brief summary and some excerpts from the actual audiotape/slide portions of our instructional materials. [*Color slides accompanied both summary comments and actual program excerpts.*]

In the introductory lecture, we make the point that everyone has some level of physical fitness—and our students can learn the cues of their own level of fitness, and procedures to change their level, if they wish.

As to the three basic concepts, strength is defined as a short duration of force, and endurance as a longer duration of force. Cardiovascular endurance is defined and its importance for sustained activities is discussed.

The first four lessons teach students the cues indicating relatively low levels of physical fitness and, at the same time, provide an in-depth explanation of the three components of fitness. Students learn how each contributes to fitness and they learn the cues of weakness with respect to each component. For example, the more abstract issue of recovery rate is defined as the length of time for the heart to return to its resting rate.

There's a demonstration break during the lesson—and students engage in mild activity, then take their own pulse in order to measure their own recovery rate.

In lesson three, the effectiveness of the CV system is associated with the level of stress typically imposed. For example, activity will maintain the number of capillaries surrounding the alveoli sacs. Students see that a stressful situation imposed upon an ineffective CV system may result in heart attack.

The effects of cholesterol buildup are also explained in terms of possible contribution to blood clot formation which may lead to a stroke or heart attack.

The essentials of any test for present level of CV endurance now can be understood by the student. A break in the lecture permits students to go through the activity portion—bench-stepping—and to measure their individual recovery rates. As their heart rates recover, the lecture is resumed with a summary.

During lecture four, the need for muscular fitness is expressed in terms of both short term and long term effects of low fitness. Muscular endurance is discussed with respect to immediate and delayed muscle soreness. Here is a portion of the instruction regarding muscular fatique:

We'll use pushups as an example in order to explain what happens within the body as a person engages in a typical activity.

When we decide to move a hand, an arm, or a leg, we can usually do so. Pushups require us to move sets of muscles in much the same manner. Our brain signals the muscles by sending a stimulus via our system of nerves. When an impulse arrives at a muscle fiber, chemical changes take place in the muscle cells. The result of these chemical changes is a release of energy—a short movement of the fibers, which is called a contraction. This contraction of the muscle fibers results in body movement. The energy turned loose in thousands of muscle cells results in contraction of the fibers and movement of the body—in this case, one pushup.

What's happening in an individual muscle cell where the energy is turned loose? The source of this energy is a substance called glycogen, stored in the muscle cell. The glycogen is there *before* the cell receives the stimulus from the brain. The stimulus sets off the chemical change. Energy results and muscular contraction begins. But the chemical change also creates waste products. What does the body do with these waste products? One waste, carbon dioxide, passes into the blood stream and is carried back to the lungs to be exhaled. Another important waste—lactic acid—tends to remain in the muscle cell.

It is this remaining lactic acid which the muscle cell reconverts to glycogen. In other words, the chemical change which provides energy also generates waste products. But the chemical change *can* continue and *can* change the lactic acid back into glycogen. The glycogen, once restored, can provide more energy. All the muscle cell needs to keep the cycle going—to change the lactic acid into more glycogen—is oxygen. The cardiovascular system must provide oxygen because, unlike the energy stored as glycogen, the muscle cell cannot store its required oxygen. It is the supply of oxygen which prevents the buildup of lactic acid in the cell. Without oxygen, the buildup of waste products results in fatigue —the muscle will "grow tired" and body movement will slow down.

Now, how immediate is your need for oxygen during activity? Suppose you were to try doing five to ten pushups while holding your breath. Without breathing—and, thus, without supplying oxygen to your muscles, what will happen to your ability to do pushups? (At this time, your instructor may break for a demonstration.) You may stop the tape recorder at this point.

This is a typical break for a demonstration during a lecture. These demonstrations are designed to cause students to attend to particular tactile cues resulting from their own activity—motor sensations associated with the aspects of physical fitness which are being dealt with in the lesson. Fatigue is explained in terms of eventual buildup of lactic acid due to insufficient supply of oxygen.

Lesson five explains the purpose of preparing muscles for more vigorous activity. The two main purposes of skeletal muscles are described—their purpose in holding the joints of the body in place and, thus, one function of muscle strength is for protection of the joints. Mild stretching exercises are included to deal with the necessity for flexibility. Here's a portion of the instruction describing the second function of muscles and leading to the issue of flexibility:

The muscles that surround each joint also provide the force necessary to move body parts. Each joint has a set of muscles—at least two muscles in the set. Again, here is the elbow as an example. The muscle at the right—the bicep—is attached above and below the joint, the elbow. When the bicep contracts, the force acts about the elbow as a hinge and the forearm is pulled upward. Thus we contract our bicep when we want to *raise* our forearm, in other words, to close the joint.

But notice that the other muscle around the elbow—at the left—is also a part of the set of muscles surrounding this joint. At the same time that the bicep is contracting, this second muscle—the tricep—must relax. And the more the bicep at the right contracts, the more the tricep at the left must relax and extend. When we want to straighten the arm—and thus the elbow—the reverse action must take place. We contract the fibers of the tricep while, at the same time, relaxing the bicep. This reverse action pulls the forearm down, in this case, and straightens out the elbow.

Every body movement takes place in essentially the same manner. The muscles work in pairs, with one contracting while the opposing muscle relaxes to its extended length. In the case of hinge joints such as the elbow, at least two muscles are required. Around the ball and socket joints in the shoulder and hip, there are several pairs of muscles working in opposition to one another. But the principle is always the same. One muscle contracts to provide the force for body movement while the opposing muscle relaxes and extends in order to permit the movement to take place.

Now that looks like a great system! But if the muscle that's relaxing reaches the limit of its extended length and its opposing muscle wants it to extend further—what's going to happen?

We'd like you to check this question yourself. Try bending your elbow and then straighten it out—going through the range of movement of your elbow. Now your instructor may take a few moments to have you check the range of movement of your hip. To do so, you lie on your back with your leg straight and your foot held flat in its normal walking position. Then raise your leg and bring it upward as far as you can. Your instructor may give you more instructions at this time. You may stop the tape recorder at this point.

The lecture resumes by noting the tightness of the hamstring muscle in comparison to the lack of tightness of the elbow muscles. Possible range of movement is defined as the degree of flexibility, which is maintained by moving the joint through its full range. Typically, flexibility decreases when a person is less active—especially true with loss of flexibility in the neck, shoulder, and hip joints. The function of the receptors is explained with respect to the extended limit of a muscle and the student is able to understand why stretching exercises —used to increase flexibility—must be performed slowly.

Lesson six introduces the running program we propose to build up the CV system once the student has met the minimum heart recovery rate requirement. Here is a summary of the first part of lesson six:

Let's briefly summarize what we've said about running during the building up period. Running should be comfortable so you should slow down or stop if you experience the cues of overstress: excessive breathlessness, pain in the side, or a breakdown of form or skill. You should try to practice good form during this period. If you have any questions about good form, you can check with your instructor.

You should progress in stages from a comfortable three-minute run up to a three to six-minute run and then up to a ten-minute run over a period of two to three weeks. You should run comfortably—slowly, or even jog, if necessary. After running, follow a "cooling down" procedure; keep moving, breathe deeply, and raise your arms in order to speed recovery of your CV system. When you can run comfortably for ten minutes, you've completed the last stage of the building up period—a precautionary guideline similar to the Bender and Shea test for the toughening up period—and you may progress to the overload period of your fitness program.

The most accurate way to describe a CV overload program is "more of the same." You are merely continuing an increase of regulated stress upon the CV system. The activities also are the same during the overload period, with an emphasis upon all-out effort, that is, vigorous running, swimming fast, racing a bicycle, and so forth. A deliberate overload of stress, if continued for a long term, will result in long term adjustments of the CV system. By "long term," we mean anywhere from one to three months. The length of time required for long term adjustments within the CV system will vary from person to person, but we know that long term adjustments seldom take place in less than one month.

Technically, when you progress from a three-minute run to a six-minute run, you are adding stress to the system. Long term adjustments actually begin during the building up period. But deliberate regulation of stress during the overload period has a far greater effect in bringing about long term adjustments.

What are these long term adjustments? They include further development of capillaries surrounding the heart and lungs, increased capacity of the lungs and vessels, and strengthening of the heart during the overload period.

Consider the term "overload." The load or stress is implied to be "over" something. The stress upon the CV system at any particular time must be slightly greater than before. As a result of overload, the CV system is required to supply more oxygen than before. The constantly increasing demand upon the CV system results in long term adjustments.

Lesson seven requires a higher level of active student response because the student must learn to manipulate the three variables used to regulate stress of a CV overload program. Several response situations include a variety of CV activities—a range across all of the irrelevant attributes of this key concept—showing students that the basic procedure of varying stress applies to any CV activity that might be included in a program.

During a break, the students perform a variety of activities—measuring heart rate after each. They note that heart rate increases when they work harder, when they work against resistance, and when they work large muscles or muscle groups. After the break, the lecture resumes with a summary of these points and then introduces interval training, as one way to increase stress in a program and, finally, introduces and explains circuit training as another way to regulate a CV program.

A sequence of instruction from lesson eight explains good form in terms of coordination and timing and the function of many repetitions with light resistance when acquiring good form. The remainder of this 14-minute lecture defines "set," stresses the importance of low resistance when practicing good form, and offers a number of guidelines to good form.

In lesson nine, the student learns how to regulate stress of an overload program for muscular development. The program provides the student with guidelines to follow with any activity. The lecture discusses the need to balance exercises between opposing muscles, presents a suggested sequence for activities—upper body, legs next, and stomach muscles last—and concludes with a discussion of specific warmup requirements.

Lesson ten discusses the relative advantages and disadvantages of isotonics and isometrics. The student learns that isometrics are a useful supplement in a fitness program, but their usefulness is limited to strength development. The reasons for this are explained, as are the reasons why overemphasis of isometric activity may result in reduced flexibility.

Common isotonic exercises, with resistance increased by weights or by workout with a partner, are discussed as an alternate to weight training. Students learn two general procedures for increasing resistance of such exercises. Here's a sequence of instruction at this point:

Variations of pushups are an example of one basic situation—increasing resistance by causing a muscle to contract and push against greater weight. As a general guideline, you try to locate more weight immediately above the pushing muscles.

Another basic situation for adding resistance is similar, but—in this second case, the working muscles contract and pull against the force of the added resistance. In this case, the guideline for increasing stress can be understood by considering bones as levers moving about their joints as pivot points.

Consider the pivot in a simple case, a teeter-totter and two children of equal weight. Everything's in balance here because the children are the same distance from the pivot. But if one child moves further out, her end of the teeter-totter will go down. That child would be increasing the force she exerts by increasing her distance from the pivot.

Now let's take away the board on one side of the pivot—and let's consider this as an unusual kind of diving board with the end as a pivot. As a diver walks out the board, increasing his distance from the pivot, he's increasing the downward force in the same manner as the child moving out the teeter-totter.

Suppose we try to hold the board by pulling up somewhere near the pivot. As the weight of the diver moves further out, more holding force is required near the pivot.

What you see here, in principle, also takes place around many joints as pivot points. For example, we can picture the board as a forearm—with bicep muscle providing force by contracting near the pivot—the elbow. As a general rule, we can increase stress by locating resistance—added weight—at a greater distance from the "pivot" joint for a particular exercise. For instance, situps pivot about the hips, so any weight added will result in greater stress upon the contracting stomach muscles if it is located at a greater distance from the hips—on the shoulders, for example.

With these two guidelines in mind, let's break for a demonstration of various ways you can add resistance to many familiar exercises, and use these as part of your muscular overload program when you don't have access to a weight lifting area. You may stop the tape recorder at this point.

This is the second demonstration break in this lesson—the first being devoted to demonstration and tryout of several forms of isometric activities.

Lesson eleven explains the functioning of a maintenance program. When to shift to a maintenance program is a matter of personal preference. A level of activity between overstress and understress must be followed. Ways to measure the effect of the program are set forth—basically the same measures suggested throughout the program, except that maintenance requires a constant measure—for example, a constant heart recovery rate after a set amount of activity.

Lesson twelve provides the student with general information about the basic food types and the possibility of weight gain or weight reduction is explained in terms of a balance between the amount of calories taken into the system and the amount of calories required to sustain a physical fitness program. The role of cholesterol in CV endurance is reviewed and the reasons for preference of protein and carbohydrate intake are explained. Of course, the role of activity is emphasized.

With about 1,400 students exposed to our instructional system in the Fall Quarter of this year, we administered a questionnaire seeking an expression of student attitude. Considering SMATs again—approach tendencies, we were interested in two factors, i.e., their perception of the quality of instruction and an expression of their intent to participate beyond the course. Table One summarizes the data from a sample (N=244) of seven sections across five different instructors.

First, is our instructional system designed for the right population in terms of student perception? The first column at the top presents data, the negative expression reflecting the percentage which did not claim prior knowledge. For example, the relationship between CV endurance and heart trouble was claimed as prior knowledge by 23 per cent, thus 77 per cent said they did not know this before the course. The remaining figures in the columns on this row indicate the percentage responses of this 77 per cent, that is 92 per cent of those who claim they didn't know this are now satisfied with the quality of instruction, five per cent said too much, and three per cent are still not sure. We consider the three per cent to be our level of failure with respect to teaching this relationship.

Looking at individual responses down the column of "know before," we find that 80 per cent of the students checked two or less items and 41 per cent of the students didn't check any of these as prior knowledge. The 15-20 per cent range

TABLE 1

Fitness has been discussed in relationship to several things. Check how well you think you understand these relationships.

Per Cent

Relationships to Fitness	N = 244 I knew this before the course	100% of "Did Not Know"		
		I'm still not sure of this—your instruction should be better	This is clear enough as far as I'm concerned	You gave me more on this than I feel I really need to know
CV endurance and heart trouble	—77	3	92	5
Anti-gravity muscles and back trouble	—92	15	80	5
Flexibility and muscle tears/strains	—71	16	80	4
Causes of muscular fatigue	—77	11	85	4
How to assess my own fitness	—84	20	73	7
How to plan and run my own program	—83	22	71	7
Time needed to maintain own fitness	—84	30	65	5

We would appreciate your opinion on the following issues.

Per Cent

	Absolutely	Probably	Not Sure	Probably Not	Absolutely Not
I have a better understanding of physical fitness now.	55	40	4	1	—
I am confident that I can plan and carry out a reasonable program for myself.	40	46	13	1	—
I will be more aware of and will assess my own level of fitness as a result of this course.	33	47	13	5	2
I'll be more likely to maintain my fitness later, as I become less active.	24	44	23	7	2
I will try to continue the program I have begun in the course.	19	44	23	11	3

of perceived prior knowledge suggests our next priority project should be an extensive pretest to determine the accuracy of student perceptions and, if verified, to make administrative arrangements for advance placement of knowledgeable students. We would like to emphasize that an existing instructional system permits such decisions to be data-based and not a matter of opinion.

Turning to the second aspect of long term effects of fitness, 92 per cent claimed no prior knowledge of the relationship between anti-gravity muscles and back trouble. Our level of failure, 15 per cent, increases accordingly—a finding which we anticipated because of the relative emphasis given to these two topics in the program.

The data on short term effects also reflects the relative emphasis we placed upon these relationships. In fact, we're pleased with the 85-90 per cent perceived success range of our instruction regarding short term effects.

The data in the balance of Table One should be interpreted with regard to when the questionnaire was given. Certain administrative constraints required us to survey these opinions in the seventh week of a ten-week quarter. Considering the first administrative day and a day off for Thanksgiving, these data result from only 12 class periods of instruction. In fact, the students had not yet seen the last two "lectures"—one of these being maintenance of fitness, a fact reflected in the row "time needed to maintain own fitness." Since the course was 75 per cent complete, we are not dissatisfied with a 20 per cent failure range for the factor "individual plan."

In the second half of the table, we directed questions toward student perceptions and future intentions. With respect to "better understanding," 95 per cent indicate positive perceptions. A total of 86 per cent are confident of their ability to carry out their own program. Strictly with regard to future intent, 80 per cent indicate a positive approach to assessing their fitness, 68 per cent to maintaining their fitness later, and 63 per cent indicate a positive intent to continue the program they have begun.

While we would like to speculate on the amount of "not sure" that might actually continue, the data as a result of only 12 class periods of instruction are, in general, quite positive with regard to student perceptions—the basic design purpose of our instructional system.

In summary, we have found that basic concepts and principles of physical fitness—those which must be mastered by students who are to plan and carry out their individualized fitness programs—are quite complex. It is unrealistic to expect an instructor, operating without the support of carefully designed and tested materials, to succeed at the difficult task of making physical fitness activities individually relevant to groups of students. This is true no matter how laudable the personal educational philosophy of the instructor or how carefully specified and rationally verified his objectives of instruction might be. Adequate philosophy and, thus adequate educational goals are not sufficient. An instructor needs, in addition, sufficient administrative support in terms of instructional materials of known effectiveness, training and guidance incorporating a degree of permitted flexibility in the application of the materials, and further support in terms of recognition of his accomplishment with his students.

Our instructional system is providing the basic administrative support required. We are now in the process of refining the individual evaluation and grading procedures, researching further improvements in scheduling procedures, and making final additions to the improved instructor manual for the entire system.

With regard to complete design effectiveness of the system, we are only able to make logical assumptions. It is not likely that an individual will be able to design and carry out his own fitness program in later years if he is unable to do so upon conclusion of a basic course. Prior to redesign of the course, we were not teaching to or testing the objective—so a reasonable assumption would appear to be that most students were not acquiring the capability as a result of instruction.

As a second and more critical issue, the prior course was not designed to influence student attitude in a positive way. *In fact, we fail to find even subjective evidence to indicate student acquisition of any self-prescribing skills and few basic concepts essential to application of these skills.* Since these are the philosophical ends of fitness instruction, it is unlikely that students were able to acquire an appreciation of the means—the activity—to which they were being exposed. On the contrary, there is logical support for the position that students were influenced in a negative way.

Does the instructional system accomplish its ultimate goal—that is, will students continue or, more reasonably, resume their physical fitness programs in later life? Unfortunately, it is too early to tell. But the instructional system now exists as do the data reflecting the intent of our students upon conclusion of instruction. Knowing present capabilities and expressed intentions, it is now possible to follow up our graduates with studies directed to the ultimate instructional goal.

Key Concepts in Developing a Basic Instruction Curriculum

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The development of a curriculum, regardless of the discipline to which it is oriented, is predicated upon the belief that the experiences provided therein will be beneficial to the individual in particular, and to society in general. While some of our most meaningful experiences, from a utilitarian perspective, are generated from informal experiences, by and large man's ability to function and change his environment is the result of his formal educative experiences. The designing and sequential alignment of those experiences in a formal educational atmosphere is a complex and often highly debatable phenomenon. One of the most common and appropriate initial steps employed in devising a curriculum is that of establishing objectives the realization of which is construed to be important in terms of their effect upon the individual. But, how does one go about identifying objectives of a particular program? Typically the formal educative experience is designed to meet the broad needs of society and the more specific needs of the individual who is to function within that society. The humanities and social sciences, and indeed educational psychology, have also identified the importance of "interest" as a consideration.

A philosophical discussion could, and perhaps should, take place as to who establishes or identifies the needs of society and ultimately, individuals. While it is not within the province of this paper to dwell on philosophical considerations, it is imperative that those designing a curriculum be aware that their philosophical beliefs are the foundation upon which content and procedures are often based.

While needs and interests are also major considerations of students, and especially in this day of vociferous and demonstrative dissent, there are, on occasion, conflicts between those who experience, and those who assess these "needs" and "interests." In essence the conflict arises when the student's perception of his needs is different from those perceived by the designers of the curriculum and in a like manner interests may also be perceived differently by both groups. The development of a sound and functional curriculum is predicated upon the concept that needs should be fulfilled before interests but that the designers of a curriculum should give consideration to the latter.

Typically the responsibility of identifying the needs of students has been given to members of the faculty. The rationale for this procedure has been that the faculty, due to previous formal educative experiences and an increased awareness of the inter-relatedness of the discipline and its operational aspects is the logical source. Students, on the other hand, tend to feel that the "administrative structure" has made the faculty the "logical" source for curriculum development. The student, as a consumer, is, however, playing a major and growing role in curriculum development. While some would question the extent to which students should participate in deciding the content of their education, it is imperative that faculty recognize the contributions which students can make.

The objectives of physical education have been proposed from a variety of sources and the following objectives are set forth as being important in required basic instruction programs at the university level: (1) To teach a variety of leisure-time activities at various skill levels so that students might participate in such activities during and after their university experience, (2) To provide instruction about, and an opportunity to participate in, selected programs of physical fitness which are designed to meet the individual fitness needs of the student and (3) To convey knowledge and promote understanding which will facilitate an awareness and interest in sport, dance, and physical activity.

While brevity in the identification of the objectives of the basic instruction program leads to a lack of definitive function, it does not limit the purview of the program. If anything it enhances such. Essentially students involved in the basic instruction program are concerned with learning skills and receiving information about fitness programs which may increase their productivity and facilitate their movement in an ever changing environment. The degree to which programs attempt to impose ideas and beliefs and force adherence to slected routines and programs is a matter of debate.

Having thus made a value judgment relative to the "broad" needs of the consumer of the basic instruction program, one tends to identify the "specific" needs of the student and reflect them in course content. Programs should attempt to identify the physical education experience of the student prior to his entry in the university. While diagnostic testing is the most appropriate way of identifying these needs, such a procedure is often time consuming, and the validity of such tests tends to be wanting.

Another procedure which might be employed is that of querying the secondary schools from which a majority of the students of any particular college matriculate for the purpose of identifying those activities and experiences which students have received prior to coming into the university basic instruction program. The providing of courses at essentially the same level of instruction in the university as was provided at the secondary level is a needless and wasteful replication of effort. In fact, much criticism is aimed toward physical educators by both the recipient (the student) and individuals from other academic disciplines. The mirroring of curriculum at the university level is often an unconscious effort because those who design the curriculum at the university level often have very little input as to the background of their students. However, just as the secondary schools should plan their curriculum in light of what junior high schools offer, the university must perceive students' needs in light of their previous experiences.

The following is a model which might be employed to ascertain the curricular offerings of high schools sending students to your particular university. Department chairman and selected physical education teachers were asked to respond to four statements:

1) Evaluate each of a variety of activities relative to your total physical education instructional program.
2) Which of the activities do you feel will be added or emphasized in your total physical education instruction program, and which activities do you think will be eliminated or deemphasized in the next five or ten years?
3) What do you view as major innovations and/or developments in the physical education instructional program at the secondary level during the next five or ten years?
4) What do you view as important physical education activities and experiences that your students will need and should be provided at the university level based upon your projected program, in five to ten years?

The first two questions consisted of a check-list of physical education activities with four categories of instruction: (1) Co-educational, (2) offered in depth, (3) offered but limited, (4) not offered. Questions were constructed so as to account for the major reasons the high school offered or did not offer a particular activity. The reasons cited were: facilities-equipment, student interest, teacher preparation-experience, available co-curricular opportunities, community concern, and educational philosophy. The specific activities were characterized into the following areas: aquatics, individual and dual activities, team sports, dance, and modified activities.

The last two questions posed were open-ended and allowed the various departments to respond in narrative form giving them an opportunity to suggest to the university the kinds of experiences their students were getting, the types of experiences they thought they should receive at the university, and the direction that both the secondary and university level physical education programs should be taking in the next five to ten years.

In addition to querying the secondary schools as to their course offerings, and thus establishing the needs in light of previous formal experiences, it was necessary to go to the students to inquire as to how they perceived their high school programs, their interests, and their present and future needs. Again as illustrative of such questions which could be posed, the following were generated and given to the students at the University of Illinois.

1) Most college students benefit from regular physical activity. (a) strongly agree, (b) agree, (c) no opinion, (d) disagree, (e) strongly disagree.

The rationale for establishing such a question is to ascertain the student's belief about physical activity, and the extent to which his attitude would be reflective of voluntary participation in the program. It is incumbent upon those in responsible positions to be aware of their students' beliefs and attitudes toward activity and especially whether or not the students feel regular activity is beneficial. When such a question was posed to the male students at the University of Illinois an overwhelming majority (82%) felt that college students benefited from regular physical activity. The response to such a question is encouraging and, while it does not mean that they will actually participate in your program, it does indicate the students' awareness and appreciation of the benefits which could be derived from participation in regular physical activity.

2) What activities in which you did not have instruction in high school would you like to learn in college?

This question could simply be followed by a listing of those activities which you currently offer, and in addition provide one or two blank spaces for students to fill in activities which are not among your current course offerings, but which they feel they would like to learn. Secondary school students and those enrolled in the university should be asked this question.

When question two was posed to the students at Illinois, a variety of courses were mentioned and such a procedure enabled us to reevaluate our course offerings and especially the number of sections offered in a particular course. Those of you who register by computer, as we do, may wish to utilize data supplied in the Student Course Request Report or a similar document.

3) In which of the following areas do you think the university should provide instruction and experience? (a) team sports, (b) individual and dual sports, (c) dance, (d) exercise or physical conditioning, (e) aquatics.

This question represents a broader approach toward collecting information about students' needs and interests. The rationale for such a question tends to follow the same line of thinking which indicates that one should attempt to accommodate the interests of the students while at the same time meeting their needs. Most high schools, due to a high teacher-pupil ratio and/or a lack of facilities, are pressured into offering more team sport activities and therefore students when responding to this question will generally indicate they wish to have individual and dual sports, aquatic activities and, surprisingly enough, dance. While it is not within the province of this paper to suggest a ratio in terms of individual and dual activities, team sports, aquatic activities, etc., in relation to each other, considerable effort should be made to offer those courses which cannot be offered at the secondary level.

It is always interesting and informative to have students introspectively perceive their own particular skill levels in selected activities. Oftentimes they perceive their skill level to be quite different from that which in reality it is. However, their perceived skill level may do much to facilitate the scheduling of various skill level courses especially with regard to the number of sections of beginning and more advanced courses. Accepting this particular premise as being important, the following question could be posed.

4) In which of the activities you had in high school do you consider yourself above average in skill? (Thereafter list all courses)

The obvious follow up to the previous questions is to ascertain the activities which students have had previously and those in which they would like to have more advanced instruction. Again, the rationale for such an endeavor is to enable program directors to more judiciously schedule advanced level classes, and perhaps develop such courses where an interest prevails but there is no particular course. While it is obvious that the numbering and identification of courses as "beginning" and "advanced" is important, it is imperative that a clear understanding be made as to what the objectives of the couse are and the teaching approach to be employed. Accurate and updated course catalogs which give clear and precise course descriptions will do much to facilitate appropriate course selection by the students.

The respondents at Illinois indicated they did not feel they were above average generally in very many activities. This could be most easily observed in the area of individual and dual sports. The highest percentage of students indicated they were competent in the team sports, especially volleyball and basketall, activities offered extensively at the secondary level. Student responses to the previous questions indicated that they would like more individual and dual sports, and further indicated that the student who enters our basic instruction program has, as he perceives it, very little skill in such activities as tennis, golf, bowling, archery, badminton, handball, squash, etc. From a skill acquisition point of view, the department should be aware that while a few selected individuals may have a background in individual and dual sports, by and large the majority of our students may be classified as "beginners" in the broadest sense of the word. We should attempt to provide students with "advanced" skill level courses where the need and interest is perceived. Hence, it may be that in the individual and dual sports more "beginning" courses should be offered while in the team sports area, more "advanced" level courses should be offered.

While the concept of offering co-educational courses is certainly not new or unique, student questionnaires indicated that efforts should be continued to expand such an approach where it is currently in existence, and definitely implement same where it is not. There are obviously problems when offering co-educational courses, but all tend not to outweigh the logical argument that many of the activities which we offer will be engaged in by families and individuals of both sexes. It is imperative that men and women realize the problems which are associated with both performance and learning where sex is a variable. Recent studies at the University of Illinois with regard to co-educational versus same sex instruction indicate that both men and women favor co-educational instruction at both beginning and advanced skill levels. Again this reflects their interests in a particular course and not necessarily what in fact might be their needs in terms of a teaching-learning situation.

While the above questions tend to reflect the interests of the students, certain questions may be asked of them which will assist in perceiving and identifying their needs. Program directors should be interested in the student's reflections on the quantity and type of instruction he received at the secondary level. In an effort to ascertain the quantity and type of instruction, one might ask, "In what activities did you have six or more weeks of instruction in high school?" Various activities could be listed and the students could be asked to respond. While there are certain limitations inherent in such a question (some schools may offer five weeks of instruction and thereby the respondent would not check that particular activity), the rationale for such a question is sound. The question identifies for the basic instruction program those activities which the high school tended to emphasize and also creates an awareness in the student about the quantity of instruction he has received in a particular activity. The responses from such a question will indicate which activies tend to be taught extensively at the high school level and there would appear to be on the surface limited value in offering such activities at the university level. This is not to suggest that some experiences in team and other "popular" activities should not be offered at the university level, for there will invariably be some who would benefit from such an offering, but the extent of such offerings at the university level should complement and not replicate the secondary experiences. Certain activities which are not offered extensively at the high school level may be ones in which the students have little interest and, therefore, from an interest point of view, they should not be offered by the university. A survey of selected high schools in the state of Illinois indicated that the team sports: basketball, volleyball, soccer, flag football, and softball were offered in blocks of at least six weeks of instruction for two, and sometimes three, years.

The emphasis thus far has been on the methods and the procedures used in developing a curriculum rather than upon the content or a program of activities. The preceding section should help identify a procedure which could be followed in determining what physical education opportunities should be offered students in basic instruction programs. Of course, the one master criterion for the selection of activities is the contribution that particular activity makes to the aims and objectives chosen for the program. There are, however, certain variables which must be taken into consideration when actually identifying activities which should be in the curriculum. Included among these variables are: the faculty, facilities, structure of program (required or elective), administrative support and understanding, and the breadth and depth of the school's intramural program.

The faculty is discussed first on the ground that the dedication and enthusiasm of the teaching staff, and its collective teaching competencies have perhaps the greatest effect upon the quality of the program. The availability of individual faculty members in terms of their responsibilities outside the basic instruction program is also an important factor.

Certainly areas, facilities, and equipment comprise a most influential variable. A portion of the basic instruction program will be conducted in facilities controlled and administered by the department of physical education. However, it is very possible that other portions of the program can and should be conducted in facilities administered by the university or in off-campus facilities which can be rented.

Whether or not the program is required or elective will also have an effect upon the curriculum offerings. In the required program grades may be assigned, or courses may be taken on a pass-fail or pass-no credit basis. In required programs, credit is given for the successful completion of a basic instruction course. In elective programs basic instruction courses may be taken either for academic credit or without credit being assigned.

Whether or not the basic instruction program is offered on a required or elective basis would also influence the selection of activities. Student preferences would take precedence over student needs in determining what would be offered. In required programs team sports are often used extensively to accommodate the large number of participants. The change from a required to an elective program in those institutions which have made the switch has often been marked by a decrease in the number of team sports offered and an increase in the number of lifetime sports offered.

Students taking a basic instruction course on an elective basis will demand quality teaching and a smaller teacher-pupil ratio. If the teaching is inferior, or the class size large, students will simply drop the course. Whereas classes in a required program might be scheduled throughout the regular school day, classes in an elective program might not be scheduled at 8 o'clock or 4 o'clock, nor would they meet on Saturday. Elective programs have proven more successful where an abundance of coed classes are scheduled.

The quantity and quality of administrative support and understanding would be reflected in the basic instruction program budget, the procurement of facilities, the quality of the faculty, and in the support for innovations in the basic instruction program.

On some campuses students tend to be very active in physical activity via a strong intramural program, while on others, such as a commuter college, students need and are interested in a structured physical education program. Intramural program opportunities available to students would be a variable effecting not only the selection of activities but the scheduling of the use of areas, facilities, and equipment as well.

In addition to the variables which can be included in the curriculum offerings, there are operational considerations which will influence the basic instruction curriculum. These include the following:

1) Which activities can be offered on a coeducational basis, and how many such sections will be offered?
2) In which activities should advanced courses be offered?
3) If the students are required to enroll in physical education, should they be permitted to fill all or a part of the requirement by taking a proficiency examination? If a proficiency program is adopted at the school what shall be the rationale, the philosophy, and how shall it be administered?
4) Should students be involved in developing the basic instruction program curriculum? If this question is answered affirmatively, then the question of how they are to be involved must be answered. There are several possible ways in which students could be involved.
   A. They might be involved by asking them to fill out a questionnaire. Questionnaires were distributed to university students in the study herein described.
   B. Students might be included on a basic instruction program committee. This procedure is followed in the women's basic instruction program at the University of Illinois.

5) What responsibilities could activity coordinators assume? Possible responsibilities might include the evaluation of instruction, the conducting of workshops and the preparation of course examinations.

6) Should individual items of equipment used in lifetime sports classes be made available on a rental basis?

7) Is the student's selection of courses to fulfill the requirements in a required program to be completely voluntary, or should he be asked to select activities in two or more classifications?

It seems imperative that these questions be carefully considered for the answer to each one affects the curriculum offerings.

Program directors would gain valuable information from a survey of the types of leisure-time activities engaged in by students during their free time, and to determine if such participation is in those activities which are offered in their basic instruction programs. While such procedures may only be indicative and not definitive of the success of a program, it is encouraging to note that students tend to use their basic instruction skills in intramural and leisure-time activity. Information as the type of activities engaged in during leisure time, and number of hours per week or per semester spent in such activity will describe the extensiveness of participation. Questions calling for this information and the accompanying responses are the basis for philosophical discussion as to the need for required and even elective physical education programs at the university level.

INTRAMURAL ATHLETICS

Intramural Programming for the Community: A Right or a Privilege?

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I should like to raise for your consideration a fundamental question which, at the present time, is confronting many of the intramural administrators within the American university system. Are programming efforts by the intramural administrator for the community a *right* which has accrued to the community because of the social responsibilities of our educational institutions or a special *privilege* arising from the prerogative of each intramural administrator?

Without question, one may conclude that there is an increasing tendency on many campuses towards university involvement in providing certain recreational services for the community. In a great majority of these campuses, the intramural administrator is expected to be an active participant in that involvement. This presumption—on the part of both the community and certain individuals within the university—places the intramural administrator in somewhat of a dilemma. On the one hand, the demands of his primary function—to provide organized and free-time recreational opportunities for the students and faculty—exhaust most of his time, his funds, and the available facilities. Consequently, the intramural administrator is faced with the question as to how to justify his assuming ancillary services and activities for the community since they usually result in a reduction in the resources available to realize his primary objectives.

Traditional reasoning has held that the commitment of the intramural administrator to the university community precludes a major share of his sense of social responsibility to society. Within the last decade, however, the resonant demands of our changing society have necessitated that we as intramural administrators reexamine our position on this question. In order to accomplish this task, it is imperative that a delineation of the role of the university within society be made.

Basically, the university and its personnel are finding that there are two contrasting educational philosophies within its walls. The first asserts that the university should concern itself essentially with research and the training of individuals to facilitate their integration into society as professional people of one sort or another. This view holds that "social purpose" will evolve indirectly from the attainment of these objectives. Subsequently, individuals subscribing to this position become involved in recreational programming for the community largely as the result of empirical rather than ethical or social considerations. On several campuses, the University of Chicago for example, the vocal temperament of the adjacent community is such that a lack of attention by the intramural administrator to the leisure-time demands of the community would result in serious impairment to his capacity to administer his program. Such impairment assumes many forms: all the way from mere threats to instances of violent confrontations. Understandably, such coercion is not always conducive to meaningful, constructive cooperation.

A second, quite different assessment of the role of the university concludes that the university is an institution of society. Thus, society, as its creator, has the right to demand and expect certain responsibilities and duties from it. I find myself in essential agreement with this second position. I propose that the time has come for those of us within the profession of intramural administration to reject the rhetoric of traditional thinking—a demeanor which is being challenged persistently as problems in our communities multiply. Rational inquiry indicates that there should no longer be artificial lines between the rights of men and the responsibilities of the university. What is needed is a careful balance to help us achieve an encompassing degree of social justice. Our actions and commitments must focus on more than shallow rationales of either convention or expediency.

It is obvious that changes are occurring in our society at an unprecedented pace. Because of this, many of us have experienced a "revolution in social consciousness" which is altering our patterns of behaviour and our values. Many norms which were held to be valid in the past have become outdated today. It has become necessary for us, with the help of the enlightenment provided by experience and education, to "interpret the writing on the wall." The essence of this message is that the university should become meaningfully involved in the affairs of the community. I believe that this is imperative if both entities hope to survive. One plausible direction for this involvement is increasing the recreational opportunities available to the community.

In view of the severe limitations in time, facilities, and money, how can (and should) the intramural administrator participate in that involvement? Although any answer to that question would depend, in part, on the situational factors relative to each campus, several courses of action may be proposed:

1) The intramural administrator should evaluate the utilization of his available resources. Community programming requirements should be allocated a portion of those resources whenever possible. For example, on many campuses, the weekend and vacation hours present a feasible opportunity for community participation in university recreational facilities.

2) The intramural administrator should request university funding and material assistance for community recreational services to be administered under his supervision. At a time when many universities are attempting to relate to their surroundings, while at the same time trying to minimize the criticism directed to the university because of its bureaucratic nature, efforts in recreational programming for the community can provide valuable dividends in terms of public relations and communication.

3) The intramural administrator should assume an active role within the community by serving as a member of councils and/or committees concerned with the overall problem of community recreation. His level of expertise in both organized and unstructured recreational programming can provide a needed source of both experience and knowledge. The governing powers within the community should be urged to assume a greater responsibility for the recreational needs of their constituents.

4) The intramural administrator should work closely with other agencies, both within and outside of the university, to provide the cooperation needed to facilitate recreational programming for the community. His access to facilities, to experienced and competent recreational personnel, and to funding opportunities from both state and federal agencies can provide the level of coordination which will draw forth the maximum utility from the combined resources. (For example, during this holiday vacation, the Division of Intramural Activities of the University of Illinois, Urbana-Champaign, in conjunction with the park departments from both adjacent communities, is sponsoring a daily sports activity program on the Urbana campus for the youth of both cities.

The university must stand for certain values. What are they? I can do no better than quote the late Prime Minister of India, Nehru, who summed them up with great insight:

> "A university stands for humanism, for tolerance, for reason, for progress, for the adventure of ideas, and for the search for truth. It stands for the onward march of the human race towards even higher objectives."[1]

To the extent that we as intramural administrators can project something of his spirit in our work, we will be better prepared to meet the disturbing and insistent demands of this age.

A Future Look at Intramural and Recreation Programs at Colleges and Universities in the United States

Pete Steilberg, Jr.
University of Washington

We're very proud of our Intramural program and facilities at the University of Washington. Like Purdue University, the University of Illinois, the University of Tennessee, and U.C.L.A. to name a few, our programs and facilities are being formulated to cater to increasingly diversified interests.

Prior to 1967, intramural programming at the University of Washington took a back seat to all intercollegiate and physical education programs with respect to facility use, and unscheduled recreation was, for the most part, non-existent. Husky Stadium and "Hec" Edmundson Pavilion were not built with intramural and recreation activities in mind. The hub of our 3 year old Department of Intramural Activities is our $5,000,000 Intramural Activities Building. This building plus our Golf Driving Range and our yet to be built marine recreation facilities are being financed from student fees. Current operation of each of these facilities is partially self-sustaining. In as much as these facilities were built using student fee money, sincere efforts are made to protect the facilities from encroachment by outsiders. Associate Professor Len Stevens directs the Department with its 25 full-time and 150 temporary hourly help employees. Students for the most part fill the temporary hourly help positions which consist of duties such as life guarding, supervising court reservations, or assisting in one of our equipment issue rooms.

The building has recorded 2,000 uses in a single day via towel count and perhaps the biggest co-recreational drawing card is the swimming pool which remains open over 90 hours each week. Students or members of the faculty and staff who have purchased a facility use card, or guests on a 50 cent per use basis may use the pool at any time during the building operating hours.

The organized program consists of four main groups namely; the Men's Program, the Women's Program, the Co-recreational Program, and the Sports Club Program. Building users have several ways of becoming involved in most of our activities. The majority of our users simply participate in unscheduled recreation; however, because of the specialized nature of some activities, other users are drawn into our sports clubs to learn the fine arts of fencing, karate, and so on. Others can enroll in physical education courses for some activities. The illustrations will show the myriad of activities which are included. Not all of our activities operate out of our building. Our Sailing Club, the Canoe Club, the Women's Crew Club and the Men's Intramural Programs operate out of what is now called the Canoe House; however, in the near future, our new marine recreation facility will be added to our lake front.

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[1] K. G. Saiyidain, "Universities and Social Responsibility," *Liberal Education*, 51: 478-485, December 1965, 484.

The most notable feature of our program has been the growth in the number of sports clubs since our department was formed. A safe prediction would be that more and more colleges and universities will be yielding to increased pressure from student groups desiring support for club activities. Perhaps of professional concern to the physical educator should be the effect that such programs may have on service courses. It is probable that in the not too distant future, the most practical means for a college or university student to learn the fundamentals of any specialized activity will be through joining a sports club.

Clubs at our school for the most part bring together individuals with common interests and skill levels; however, to perpetuate the club lessons are usually offered as encouragement to join the club and usually the fee for joining a club is a good deal less than fees charged for enrolling in any outside professional course.

Exotic activities such as karate, fencing, skydiving, SCUBA diving, mountain climbing, spelunking, white water canoe racing, are not courses commonly offered by most college or university physical education service course curriculums. There *is* interest in these activities as evidenced by the 150 members of the U of W Climbing Club, the 1,000 or so members of our Husky Yacht Club and the 100 members of our Karate Club to mention three.

Along with our expanding sports club program comes an expanding program of headaches with legal and fiscal implications.

The future program will also place more emphasis on scheduling unorganized recreation periods on facilities in order to cater to those individuals who are not interested in or can't devote the time to formal scheduled programs.

The revolutionary attitudes expressed by using student bodies are bound to effect changes which will benefit more students.

Inner City Demands on the Use of University Facilities

S. L. Fordham
University of Illinois
Chicago Circle

My initial reactions to Ben McGuire's request that I serve on a panel in the intramural section were 1) I was out of my area of competency and 2) why didn't he ask our Intramural Director to speak. I do feel fairly well qualified to speak on the assigned topic because for the last six years our campus has been located in the heart of Chicago's inner city. Literally thousands of residents of many ethnic groups were displaced with the new 106 acre campus which created suspicions and animosities that will exist for many years. A student enrollment of 5,200 students in 1965 has now grown to 18,500 and it is expected to reach 32,000 by 1980. Until two weeks ago our program in physical education and athletics was housed in makeshift facilities. A vacant girdle factory with 10' ceilings and pillars every 20' became one instructional area and an unused bank building was used for some of our other activities. Requests for space in these areas were practically zero which is understandable. The picture has changed considerably in the last few months because of the completion of a $6,000,000 facility which was occupied two weeks ago. We never fully realized until now the seriousness of the shortage of a facility of this type in the inner city. This brief explanation provides some background for the situation that has existed in the past on our campus.

Our university has taken the position that it is no longer an academic question as to whether the institution should meet the leisure needs of the inner city. It has no choice in the matter but to do so. Those who plead that a university is primarily an institution of higher learning would take a different approach but this decision is reached at the higher levels of administration. With the mission clearly established and a commitment made to the community that facilities would be made available, the Chancellor appointed an eight man committee in April of the present year. The committee was charged:

1) To examine the total range of uses of the new Physical Education building.
2) To establish a set of priorities for use of space in the building or to recommend a procedure for the establishment of such priorities.
3) To recommend a procedure for day-to-day implementation of these priorities, including recommendations for the management of reservations and other issues related to space allocation in the building.

Members on this committee consisted of the Director of the School of Physical Education, Director of the Office of Neighborhood Relations, Director of the Office of Space Utilization, Director of Auxiliary Services, Director of the Educational Assistance Program (culturally and economically deprived students), Chairman of Senate Committee on Athletics, Dean of Student Affairs and chaired by the Director of the Physical Plant.

This committee met regularly over a seven month period in sessions which extended at some times over a four hour period. In November a report was submitted to the Chancellor. The major recommendations of this report were:

1) A detailed policy on the University's role in neighborhood and community relations should be formulated and adopted.
2) The Office of Space Utilization and the School of Physical Education should develop maximum facility capabilities.
3) A Chancellor's Committee on physical education facilities should be permanently appointed to:
    a) Establish general priorities on the use of physical education facilities.
    b) Examine the physical needs of the physical education program.
    c) Advise the Chancellor on matters affecting the use of physical education facilities.
4) The use of all physical education facilities by outside groups should be scheduled through the Reservations Office.
5) All proposed community-neighborhood use of physical education facilities should be coordinated through the Vice Chancellor for Community Relations.

In addition to the above-named report another committee prepared a report entitled, "The Local Community's Physical Education and Recreation Concerns: Projected Neighborhood Involvement in the Use of the Physical Education Building." This report was somewhat critical of the University and particularly physical education regarding the lack of community use of University facilities. Despite some degree of hostility and suspicion throughout the report it provided first hand feedback directly from the community and identified quite clearly the problems concerning community use of the physical education building and how the community viewed their involvement in its use.

I believe these two documents will provide a starting point in the decision making process and time alone will tell how successful we have been.

It should be perfectly obvious to you at this juncture that I have provided no answers for many of the questions you have and further, that we are rank beginners in this serious problem that exists in our inner city areas.

I will close with some general comments and reactions based on past experience and what we see ahead:

1) Insist on adequate funding for supervision, leadership, equipment, and security; don't subsidize your own staff to keep the building open during the evenings and on weekends.
2) Insist on a set of program priorities; i.e. required, professional, athletic, intramural and student recreation programs.
3) Identify as quickly as possible individuals who well provide a liaison with the community and make certain that they are accepted by the community.
4) Be modest in initial offerings; don't promise the moon.
5) Avoid dehumanization.
6) Avoid sitting in your ivory tower and imposing middle class values upon inner city people; go to the community level and work with their leaders cooperatively and constructively.
7) Don't consider your program for the community a part of the welfare state.
8) Accept the fact that urban problems are multitudinous and a university cannot be all things to all people.
9) Try to be alert to all requests for use of space—i.e. sectional basketball games, badminton tournaments, etc.
10) Encourage community use of libraries, laboratories and other facilities on the university campus.

In closing I submit to you that all the problems of the inner city cannot be solved by teaching a boy how to shoot a basketball or a girl to swim. This task must be shared by all—Departments of English and Music and Literature and the rest of academia.

The President's Report

Chalmer G. Hixson

In compliance with the directives of the NCPEAM, your president has served his office as follows:

1) Members were appointed to fill the existing vacancies on all Standing and Joint Committees as legislated in the Constitution and Policies. Chairmen of said committees were appointed and provided copies of the appropriate operating code. Additionally, the following Presidential Committees were appointed to study current issues in NCPEAM:
   (1) Ethnical Problems
   (2) Fiscal Resources
   (3) Role of Junior Colleges
   (4) Restructuring and New Directions
2) To extend the influence of NCPEAM in legislative matters and to promote membership, "state representatives" were solicited and appointed in 48 states and six provinces in Canada. The letter of invitation is included to explain the roles of these formally appointed representatives and to encourage all members to join the mission.

The NCPEAM, in its efforts to grow and to have greater impact on college physical education, has two identifiable needs for a representative in each state:

(1) The Legislative Committee has been expanded to include one member in each state as well as a Steering Committee by continuing appointments at the discretion of the President. These members are asked to alert other members in their respective states on pertinent legislation which is to be supported or opposed. No member is ever asked to deny his own conscience in any matter.

(2) The Executive Council, the Membership Committee, and your President believe we are involving but a fraction of our potential membership in the colleges and universities of the country. As President, I have the authority to appoint a committee to work on this problem; and so, I want a member in each state to make a "soft-sell" to his colleagues by assisting our Secretary-Treasurer and by representing NCPEAM in appropriate ways. There is little doubt that our membership (Proceedings, two issues of Quest, and the fellowship) is the world's greatest professional bargain. We should have 18,000 members.

As President, I'd like to invite you to serve the Association in both of these capacities. I urge you to accept at once so we can get the mission off the pad and on its way. If you will reread the purposes of NCPEAM, you will know that we have fallen far short of many of them in the past; yet they are important and worthy of a few hours of one's time each year. A small amount of effort by each of us will combine into a large achievement by the Association.

I hope you will join with me to promote NCPEAM. Please use the enclosed card to let me know your decision at your early convenience.

These men reported these activities in their states to meet the challenge:

(1) Personal letters to college physical educators throughout the state.

(2) Face-to-face contacts with potential members.

(3) Numerous phone calls to colleges and universities in the state.

(4) Promotional announcements in college section meetings of State and District Association conventions.

(5) Membership blanks and brochures on the values of NCPEAM were mailed to college physical educators in the state.

(6) Mailing lists of college physical educators were compiled.

(7) Chairmen and directors of departments of physical education and athletics were urged to promote NCPEAM among their faculties.

(8) A display was installed; brochures and membership blanks distributed at State conventions.

(9) All current members of NCPEAM in the state were asked to promote membership in NCPEAM among their colleagues.

(10) A faculty member in each college department of physical education was recruited to present the values of membership in NCPEAM to his colleagues.

In addition, the state representatives promoted action on two legislative matters at the national level as indicated in the report of the Legislative Committee.

Such efforts continued for the next few years will bring NCPEAM to its full stature and maturity as a professional organization. We, the other members, owe an unpayable debt to each man.

3) Representatives were identified and appointed to the inauguration of college presidents, the dedication of facilities, and the funeral of Arthur Steinhaus.

4) A period of time was spent in the public relations booth sponsored by NAPECW—NCPEAM at the AAHPER convention in Seattle; and tentative plans are being confirmed to repeat the venture in the Detroit convention.

5) Permission to quote material from the Proceedings was granted.

6) Qualified members were recommended as candidates for several desirable positions in universities.

7) The plans for the 75th Annual Meeting for New Orleans, Sheraton-Charles Hotel, January 5-8, 1972, are being finalized.

8) The Executive Council Meeting was called and conducted in Seattle during the AAHPER convention.

9) The Newsletters were prepared and distributed to the membership.

10) Permission has been secured for the deposit of the historical records of Quest with those of NCPEAM at the University of Illinois, A. C. Moore, Archivist.

The cooperation and support of C. E. "Pat" Mueller, Deane Richardson, Sheldon Fordham and Lee Ragsdale are here acknowledged; these men, together with the committees and state representatives, have made this a most stimulating and rewarding term of office. As the gavel is passed to Deane, I am most optimistic for the future of NCPEAM. My thanks to all for making this year possible.

Secretary-Treasurer's Report

C. E. Mueller

In addition to administering the routine affairs of the Secretary-Treasurer's office for the fiscal year 1970, the following items are identified for your information.

1) The Secretary-Treasurer set up the NCPEAM booth, sponsored in conjunction with NAPECW, at the AAHPER Convention in Seattle.
2) The PROCEEDINGS were edited, printed, and distributed to the membership by mid-summer.
3) Three NEWSLETTERS were printed and mailed to the membership in February, May, and October.
4) The Research Committee project, "Research Specialists in Physical Education," was mimeographed and mailed to the membership.
5) Changing the dates of the fiscal year and mailing out membership dues invoices continues to produce positive results to the extent that 1134 memberships have been renewed for fiscal 1971, just 16 less than the record total of 1150 for last year.
6) Solicitation of additional contributions on the membership dues notices resulted in only one five dollar ($5.00) donation.

Membership Summary

	1969*	1970
Honorary Members	70	74
New Members	111	170
Active Members	793	908
TOTAL	974	1150

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* Fiscal 1969 was nine months.

STATEMENT OF CASH RECEIPTS, DISBURSEMENTS, AND FUND BALANCES FOR THE YEAR ENDING AUGUST 31, 1970

FUND BALANCE, DECEMBER 1, 1969		$ 460.52
RECEIPTS:		
Membership dues	$11,624.44	
Publication proceeds	1,388.31	
Reimbursed expenses	123.59	
		13,136.34
		$13,596.86

DISBURSEMENTS:

Office supplies and expense	33.70	
Secretarial and clerical	738.20	
Addressograph and mailing	996.45	
Printing	667.27	
Newsletters	375.42	
Proceedings, 1970	4,000.00	
Quest monographs	3,479.40	
Convention expense	1,430.47	
Secretary-treasurer fees	700.00	
Officers' expenses and fees	81.03	
Audit	300.80	
AAHPER booth rental	82.79	
Bank charges and discounts	8.87	
Miscellaneous	128.00	
		13,022.40
FUND BALANCE, AUGUST 31, 1970		$ 574.46

SUMMARY OF FUND BALANCE

Checking account—University National Bank Minneapolis, Minnesota	$ 574.46

Convention Manager's Report
74th Annual NCPEAM Conference

Lee Ragsdale

The following report of the 74th annual meeting of NCPEAM is submitted as directed by the operating code.

Facilities

The Portland-Hilton Hotel provided excellent facilities and full service for all convention needs. Room rates, complimentary rooms, food prices, and hotel services were agreed upon in advance and placed in writing. A pre-convention meeting was held December 23 for all employees of the hotel who would be engaged in convention arrangements and members of the convention committee.

Convention Committees

Committees were formed in the spring of 1970 from college physical educators in the Portland area. They were headed by the following chairmen:

Arrangements—Robert Scruggs, Portland State University
Registration—Charles Becker, Portland State University
Publicity—Michael Tichy, Portland State University
Luncheon—Herb Booth, Mt. Hood Community College
Hospitality—Claude O'Connell—Clark College, Vancouver, Wash.

These men selected additional members for each committee. Three meetings were held by the group in addition to the final meeting with hotel personnel in December. Special thanks are due the chairmen and their committee members for their efforts in planning the convention activities with which they were charged. The NCPEAM Operating Code Manual was particularly useful to the various chairmen and the convention manager in making plans.

Committee Activities—General

Several press and television interviews were set up with Association officers and with a number of the program speakers. Local exposure was excellent in spite of fierce competition for the time of the media at year's end. A special section for NCPEAM members was reserved at the Monday and Tuesday night sessions of the Far West Basketball Classic for those who had ordered tickets in advance. Arrangements were made for Commissioner Francis Ivancie to extend the greetings of the city at the first general session, and for Chancellor Roy Lieuallen to welcome the members at the luncheon on behalf of the Oregon State Board of Higher Education.

Attendance—Special Events

Cocktail Hours (No Host)
  Sunday—5:00 P.M.— 20
  Monday—6:30 P.M.—100
  Tuesday—6:45 P.M.— 46
Luncheon—Tuesday 89
Far West Basketball Classic
  Monday (Tickets sold) 27 (Bus—16)
  Tuesday (Tickets sold) 44 (Bus—23)
Bus Tours—Three tours—all cancelled—no attendance
Handball and Swimming at Portland State University—23 (No wives)

Attendance—Program Meetings

Executive Council Breakfasts:
  Monday—15
  Wednesday—13

Research Section:	Monday	Tuesday
Philosophy	33	31
Experimental	28	23
Teaching	29	37
Sociology	26	28
History	17	13

Basic Instruction:
  Monday—32
  Tuesday—59

Attendance—Program Meetings (continued)

History of Sport:
  Monday —51
  Wednesday—45
International Relations: Monday —92*
Intercollegiate Athletics:
  Monday —103*
  Wednesday— 69

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*Overflowed Room.

First General Session:
  Monday —148
  Tuesday — 75
  Wednesday—151

Intramural Athletics:
  Tuesday — 33

Fellowship of Christian Athletes: Tuesday	10
Special Interest Groups: Tuesday	
History of Sport and Physical Education	26
Growth and Development	5
Tests and Measurements	0
Organization of All-Campus Recreation	16
Kinesiology	25
Professional Activities	9
Teacher Evaluation	32
Total Convention Registration	244

Recommendations

The following suggestions are made as a result of our experiences at the 74th Annual meeting.

1) Rent audio-visual equipment within the hotel if possible. If not have someone from the local institution who can repair equipment or secure additional equipment on short notice.
2) Have a competent operator for visual aids available whether requested or not. An operator can service several meetings simultaneously by instructing local helpers in the operation of the equipment ahead of time and supervising their efforts during the sessions.
3) Adopt a hard-nosed policy regarding last minute requests for equipment. We did not need to do this because of instant availability of a large amount of equipment. However, had college equipment been used, we could not have serviced nearly a dozen late orders.
4) Assign an individual to be responsible for visual aid equipment at each meeting where they are used. Very close security should be maintained on all equipment including privately owned pieces.
5) Arrange special bus transportation and tours only after ascertaining the demand. This can be done after the first day of the convention and will avoid cancellation charges.
6) Continue the pre-registration the evening before opening sessions. A social hour is nice for this time, but don't spend any money on it. A no-host cocktail session is practical.
7) When only one or two meetings are in session simultaneously, schedule them for large rooms regardless of their attendance at previous conventions.
8) Request that the convention manager receive a copy of all papers given at the meetings. This will aid in writing post-convention articles for magazines and news media.
9) Continue to have all agreements with hotels for rooms, food, and other service in writing well in advance.
10) Obtain from the Secretary-Treasurer a copy of all registration material in advance of final planning.

A number of fine comments and letters were received about the convention. We are grateful to the Association officers, the Portland-Hilton, and the members of the local committees for providing a well-received conference.

Quest Advisory Board Report

Harold VanderZwaag

The joint NAPECW-NCPEAM membership application form will be discontinued. You may recall that this form was prepared in advance of the Seattle AAHPER meeting for distribution at the booth. Among the reasons for making this decision were the existing availability of the NCPEAM membership brochure, the difficulty in applying the form to the NAPECW, the relatively high costs, and the lack of information about the effects of this effort. Copies of the form still remaining will be available for distribution in Detroit for the NCPEAM only.

The most important item of pending business involves the appointment of a successor for Joan Nessler as Business-Circulation Manager. Joan has announced that she will terminate her responsibilities in this position on July 1, 1971. The next board meeting is scheduled for April 4, in Detroit. If at all possible, we would like to have Joan's successor appointed prior to that meeting, so that he or she can be present to facilitate the transition in this important office. The Business-Circulation Manager may be either a member of NCPEAM or NAPECW. Major criteria for selection are competence and willingness to undertake the job. Recommendations for this position are most welcome. Any member of the NCPEAM who wishes to recommend someone for this position should notify me or one of the other board members as soon as possible.

Enclosed is a copy of a job description for this position. As members consider persons to suggest for the position, two factors might be kept in mind. It might be more desirable to appoint a calendar year employee. With the summer distribution of *Quest*, as has been the case in the last two years, bills come in during July. Also, there is on-going correspondence and work associated with the task which would be facilitated if the Business-Circulation Manager is available more or less throughout the year. Also, secretarial support from a Business-Circulation Manager's "home institution" is important. The amount of paper work is enormous and seems to be increasing.

Preliminary inquiries have been made regarding the indexing of *Quest* in other references. It appears that this will have to wait until the next in-depth content study by the American Library Association's Reference Services Division is undertaken. We have asked to be considered for indexing in three references: *Reader's Guide to Periodical Literature, The Educational Index*, and the *Social Science and Humanities Index*. We have also taken steps to be recognized by AAHPER's *Completed Research in Health, Physical Education and Recreation*, particularly in the bibliographic indexing.

Minutes, Executive Council

EXECUTIVE COUNCIL MEETING
SEATTLE, WASHINGTON
APRIL 6, 1970

MEMBERS PRESENT: Sheldon Fordham, Chalmer Hixson, Will Holsberry, Dave Matthews, C. E. Mueller, Deane Richardson.

OTHERS IN ATTENDANCE: Jim Bosco, Shelly Brightwell, Wayne Brumbach, Sam Cooper, Art Gallon, Burris Husman, Bill Johnson, Bill Penny, John Schendel, Robert Singer.

1) The meeting was called to order at 9:00 a.m. by President Hixson. Although a quorum was not present, business was conducted with the intent of affirming actions taken when a quorum is present at the next Executive Council Meeting.

2) Minutes of the December 30, 1969 meeting were approved as distributed.

3) Singer, Chairman of the Research Committee, reviewed three research projects:

   a. Services of Research Specialists

   b. Equipment Inventory

   c. Physical Education and/or Undergraduate and Graduate Programs

   MOTION by Fordham, second by Richardson, that NCPEAM mimeograph and distribute a list of Research Specialists in Physical Education. PASSED.

4) Hixson reported that State Representatives had been appointed to carry out legislative and membership responsibilities.

5) Comments about the NCPEAM-NAPECW booth at the AAHPER Convention were solicited. Generally, the reaction was good, and it was recommended that the project be continued.

6) The Secretary-Treasurer reviewed the financial and membership status of the Association. MOTION by Fordham, second by Richardson, that a registration fee of $10.00 should be charged to non-members attending the annual NCPEAM Convention. PASSED.

7) Richardson reviewed three plans for the 74th Annual Convention. MOTION by Richardson, second by Fordham, to reverse the decision made at the December 30, 1969 Executive Council Meeting, and provide International Relations with scheduled time in the Program. PASSED.

8) Membership on all NCPEAM Committees was approved by consent.

9) MOTION by Matthews, second by Holsberry, that Harvey Jessup be approved as the Convention Manager for the 75th Annual Convention in New Orleans. PASSED.

10) QUEST Archives will be kept with the NCPEAM Archives at the University of Illinois Library.

11) Bill Johnson requested section status for International Relations which has operated heretofore as a committee. A decision was postponed

pending the Brumbach Committee, which will study restructuring and new directions in NCPEAM.

12) The meeting adjourned at 11:15 a.m.

Respectfully submitted,
C. E. Mueller
Secretary-Treasurer

EXECUTIVE COUNCIL MEETING
PORTLAND, OREGON
DECEMBER 27, 1970

MEMBERS PRESENT: Sheldon Fordham, Chalmer Hixson, Willard Holsberry, Bob McAdam, C. E. Mueller, Carl Peterson, and Deane Richardson.

OTHERS IN ATTENDANCE: Wayne Brumbach, Jim Ewers, Millard Fisher, Art Gallon, Leo Gedvilas, Bill Johnson, Bob Korsgaard, Larry Locke, Jim Long, Jesse Parks, J. Edmund Welch.

1) The meeting was called to order at 7:00 p.m. by President Hixson.
2) MOTION by Fordham, second by McAdam, that all actions approved by the Executive Council at the April 6, 1970 meeting in Seattle be reaffirmed. PASSED.
3) Minutes of the April 6, 1970 meeting were approved as distributed.
4) Jim Long reported on projects of the AAHPER College Physical Education Commission and requested that NCPEAM appoint a member to serve in a liaison capacity between the two groups.
5) The following committee reports were received:
   a. Constitution—Fourier
   b. Necrology—Gedvilas
   c. Historical Records—Welch
   d. International Relations—Johnson
   e. Legislative—Bearden
   f. Nominating—Matthews
   g. Research—Singer
   h. Joint Committee on Physical Education and Athletics of NCPEAM, NCAA, and AAHPER—Selin
   i. Committee to Study Ethnical Problems—Parks
   j. Committee to Study Restructuring and New Directions of NCPEAM—Brumbach
   k. Committee to Study the Role of Junior Colleges—Fisher
   l. QUEST Advisory Board—VanderZwaag
6) Finance Committee—MOTION by Richardson, second by McAdam, to approve the 1971 budget. PASSED. MOTION by Fordham, second by Richardson, to recommend a dues increase from $10.00 to $12.00 for fiscal 1972. PASSED. MOTION by Peterson, second by Fordham, to approve the 1972 budget. PASSED.
7) Membership Committee—MOTION by McAdam, second by Fordham, to accept the Committee's recommendations for emeritus membership pending a credentials check by the Secretary-Treasurer. PASSED.

8) Operating Codes Committee—MOTION by Peterson, second by Richardson, to remove conflicting statements about the appointment of the parliamentarian by eliminating items 3i, p. 25 and 3j, p. 44 of the Operating Codes Manual. PASSED. MOTION by Peterson, second by McAdam, to eliminate item 4h, p. 12 of the Operating Codes Manual. PASSED. Item 2 of the Committee's report was referred to the Policies Committee.

9) Policies Committee—

   a. MOTION by Peterson, second by Fordham, to accept paragraph 1 deleting references to health and recreation. PASSED.
   b. MOTION by Matthews, second by Holsberry, to amend paragraph 2 by accepting only deletions referred to in 1c. PASSED.
   c. MOTION by McAdam, second by Richardson, to approve the change in paragraph 1b. DEFEATED.
   d. MOTION by Peterson, second by Richardson, to delete paragraph 1d. PASSED.
   e. MOTION by Peterson, second by Fordham, to approve new 1d. PASSED.
   f. MOTION by McAdam, second by Holsberry, to approve new 1e. PASSED.
   g. Because of the deletion of old 1d, old 1e becomes 1f.
   h. MOTION by Richardson, second by Fordham, to add paragraph 3d. PASSED.
   i. MOTION by Richardson, second by Fordham, to delete health and recreation references in sections 2a and 7a under "Administering Association Affairs." PASSED.
   j. MOTION by Richardson, second by Fordham, to delete paragraph 2g. DEFEATED.
   k. MOTION by Holsberry, second by McAdam, to insert in 2g "To assist non-Association special interest groups." PASSED.
   l. MOTION by Richardson, second by Fordham, to add paragraph 3e. DEFEATED.
   m. MOTION by Peterson, second by Holsberry, to add paragraph 4f. DEFEATED.
   n. MOTION by Holsberry, second by Fordham, to add paragraph 5d. PASSED.
   o. MOTION by McAdam, second by Peterson, to add paragraph 6d. MOTION by Richardson, second by Peterson, to refer motion to the Historical Records Committee. PASSED.
   p. MOTION by McAdam, second by Fordham, to accept the Policies Committee report as amended. PASSED.

10) Resolutions Committee—MOTION by Matthews, second by McAdam, to approve Resolution number one. PASSED. Resolutions two and three were not supported by the Executive Council. MOTION by Holsberry, second by Fordham, to approve Resolution number four. PASSED.

11) Time and Site Committee—MOTION by Richardson, second by McAdam, to accept the recommendation of the Committee. PASSED.

12) Bosco's request to publish the research papers in a monograph rather than in the PROCEEDINGS was denied.

13) The meeting adjourned at 11:45 p.m.

Respectfully submitted,
C. E. Mueller
Secretary-Treasurer

EXECUTIVE COUNCIL MEETING

PORTLAND, OREGON
DECEMBER 28, 1970

MEMBERS PRESENT: Sheldon Fordham, Chalmer Hixson, Will Holsberry, Bob McAdam, Dave Matthews, C. E. Mueller, Carl Peterson, and Deane Richardson.

OTHERS IN ATTENDANCE: Art Gallon, Bob Korsgaard, and Jesse Parks.

1) The meeting was called to order at 7:00 a.m. by President Hixson.
2) Minutes of the December 27th, 1970 meeting were approved as read.
3) Korsgaard presented a proposal for life-membership in the Association. MOTION by Richardson, second by Fordham, that the question be referred to the Membership Committee. PASSED.
4) The report of the Committee to Study Fiscal Resources was received. It was recommended that a President's Committee be appointed to devise a plan which would encourage solicitation of funds through memorials, wills, and philanthropic contributions.
5) MOTION by Richardson, second by Fordham, that the Constitution Committee change the Time and Site Committee from a President's Committee to a Standing Committee. PASSED.
6) President Hixson appointed Lou Alley, Charles Mand, and Barry Pelton to work with Ann Jewett, Lynn Gaskin, and Dorothy Detherage of NAPECW to study the possibilities of joint meetings and other related questions involving NCPEAM and NAPECW.
7) Dick Swanson, Bob Lueft, and Dick Moriarity were appointed to represent NCPEAM in its sponsorship of the booth with NAPECW at the AAHPER Convention in Detroit.
8) The 75th Annual Convention will be held at the Sheraton-Charles Hotel in New Orleans on January 5th through January 8th, 1972.
9) MOTION by Fordham, second by Richardson, that NCPEAM co-sponsor the International Relations breakfast with AAHPER at the Detroit Convention. PASSED.
10) MOTION by Matthews, second by Richardson, that the auditor's report of the treasurer's accounts be accepted. PASSED.
11) The meeting adjourned at 8:40 a.m.

Respectfully submitted,
C. E. Mueller
Secretary-Treasurer

EXECUTIVE COUNCIL MEETING

PORTLAND, OREGON
DECEMBER 30, 1970

MEMBERS PRESENT: Dave Bischoff, Sam Cooper, Art Gallon, Chalmer Hixson, C. E. Mueller, Jesse Parks, Deane Richardson, J. Edmund Welch.

OTHERS IN ATTENDANCE: Bruce Anderson, Jim Ewers, Bob Korsgaard, Lee Ragsdale, Dominick Taddonio.

1) The meeting was called to order at 7:15 a.m. by President Richardson.
2) Minutes of the December 28th, 1970 meeting were approved as read.

3) President Richardson indicated he would appoint a representative to the AAHPER College Physical Education Commission. The following President's Committees will also be appointed: a) Ethnical Problems, b) Fiscal Resources, c) The Role of Junior Colleges, d) Restructuring and New Directions of NCPEAM.

4) MOTION by Cooper, second by Hixson, that Article 8, Section 1 of the By-Laws be amended to read "A quorum to conduct Association business at its annual convention shall be thirty percent (30%) of the convention registered members at the times of the business meetings. A mail vote quorum shall consist of fifteen percent (15%) of the current membership. No mail vote shall be valid after thirty (30) days from the date upon which the question was mailed by the Secretary-Treasurer to the members for action." PASSED.

5) MOTION by Gallon, second by Parks, that Article 7 of the Constitution be amended to add Section 2 "Roberts' Rules of Order shall govern the conduct of all business of the Association not covered in this Constitution and By-Laws." PASSED.

6) MOTION by Hixson, second by Parks, to recommend that the Constitution Committee eliminate the statement in Article 4, Section 1 of the By-Laws "with a quorum present." PASSED.

7) With regard to evaluating the format of the Research Section Meetings, President-Elect Bischoff will have freedom to develop a program which he deems suitable for next year's Convention.

8) The next meeting is scheduled for 10:30 a.m., Sunday, April 4th, 1971, at the AAHPER Convention in Detroit.

9) The meeting adjourned at 8:40 a.m.

Respectfully submitted,
C. E. Mueller
Secretary-Treasurer

Minutes, Association Business

FIRST GENERAL SESSION

PORTLAND, OREGON
DECEMBER 28, 1970

1) The meeting was called to order at 4:00 p.m. by President Hixson.

2) President-Elect Richardson introduced the guest speaker, Dr. Bruce Ogilvie, Professor of Psychology, San Jose State College.

3) President Hixson presented the annual President's Report.

4) The following reports were received:
    a. Joint Committee—Selin
    b. Committee to Study Ethnical Problems—Parks
    c. Committee to Study Fiscal Resources—Bischoff
    d. Committee to Study the Role of Junior Colleges—Fisher

e. QUEST Advisory Board—VanderZwaag
f. Convention Program—Richardson
g. International Relations—Johnson
h. Historical Records—Welch
i. Constitution—Fourier

5) MOTION by Taddonio, second by Matttews, that the recommendation of the Time and Site Committee to hold the 76th Convention in Pittsburgh, Pennsylvania on January 6th-9th, 1973, be approved. PASSED.

6) MOTION by Stebbins, second by Matthews, to accept the Operating Codes Committee Report as amended by the Executive Council. PASSED.

7) Brumbach presented the Report of the Committee to Study Restructuring and New Dimensions of NCPEAM. MOTION by Welch, second by Bosco, to table the report. DEFEATED. Discussion followed after which the report was received.

8) The meeting adjourned at 6:15 p.m.

Respectfully submitted,
C. E. Mueller
Secretary-Treasurer

SECOND GENERAL SESSION
PORTLAND, OREGON
DECEMBER 29, 1970

1) The meeting was called to order at 10:30 a.m. by President Hixson.

2) Matthews, Chairman of the Nominating Committee, presented the following nominations:
   a. President-Elect . . . . David Bischoff and Frank Bearden
   b. Member-At-Large . . . . Vernon Sprague and Bill Gustafson
   c. Secretary-Treasurer . . . . C. E. Mueller

3) The results of the election were as follows:
   a. President-Elect . . . . David Bischoff
   b. Member-At-Large . . . . Vernon Sprague
   c. Secretary-Treasurer . . . . C. E. Mueller

4) Woods presented the Finance Committee Report. MOTION was made and seconded to approve the 1971 budget. PASSED. MOTION was made and seconded to raise dues from $10.00 to $12.00 for fiscal year 1972. PASSED. MOTION was made and seconded to approve the 1972 budget. PASSED.

5) The reports of the Legislative Committee by Bearden and the Research Committee by Miller were received.

6) MOTION was made and seconded that the following individuals be made emeritus members: Clarence C. Chaffee, John M. Heffernan, Lloyd M. Jones, George E. Shepard, George B. Spitz, Jr., Randolph W. Webster, and Carl Youngworth.

7) MOTION was made and seconded to accept the Necrology Committee Report. PASSED. Deceased members include Harold Edgar, Mitchell

Gary, Richard Jamerson, Sidney Jenkins, F. William Kennedy, Walter Livingston, William Solley, Arthur Steinhaus, and Curtis Alderson.

8) MOTION was made and seconded to accept the Policies' Committee Report. PASSED.

9) MOTIONS were made to accept the Resolutions presented by Chairman Ewers as follows: MOTIONS on Resolutions one through four PASSED. A MOTION was made and seconded to table Resolution number five. PASSED.

10) Old Business: None

11) New Business:
MOTION by Richardson, second by Brumbach, that the Constitution be changed to include the Time and Site Committee as a Standing Committee rather than a President's Committee. PASSED.

12) Korsgaard's proposal for life membership was discussed. A straw vote indicated that the membership favored consideration of this item, and it was subsequently referred to the Membership Committee.

13) President-Elect Richardson recommended that NCPEAM serve as a clearing house for Professors who wish to exchange teaching positions during summer sessions.

14) Parks suggested that consideration be given to allowing undergraduate students to become members of NCPEAM. The question will be considered by the Membership Committee.

15) The meeting adjourned at 12:15 p.m.

Respectfully submitted,
C. E. Mueller
Secretary-Treasurer

Standing Committees

CONSTITUTION COMMITTEE

The members of the Constitution Committee were contacted by mail for recommendations concerning possible changes in the Constitution. No changes were recommended.

Respectfully submitted,
Arthur E. Fourier
Chairman

FINANCE COMMITTEE

PROPOSED BUDGETS FOR 1971 AND 1972

BALANCE BROUGHT FORWARD	**1971**	**1972**
1) Estimated Balance September 1, 1970, 1971	$ 550.00	$ 250.00
RECEIPTS		
2) Membership Dues (1100 @ $10.00)	11,000.00	13,800.00*
3) PROCEEDINGS Sales	1,450.00	1,500.00
TOTAL RECEIPTS	$13,000.00	$15,550.00

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* 1150 Memberships @ $12.00

EXPENDITURES

4) PROCEEDINGS		4,000.00	4,300.00
5) QUEST	(1100 @ $3.00)	3,300.00	3,450.00**
6) NEWSLETTERS		350.00	400.00
7) Annual Meeting		1,000.00	1,400.00
8) General Operations		2,500.00	3,000.00
9) President's Contingency Fund		300.00	500.00
10) Secretary-Treasurer's Fee		700.00	1,000.00
11) Officers' Travel Fund		600.00	600.00
	TOTAL EXPENDITURES	$12,750.00	$14,650.00
12) Estimated Balance August 30, 1971, 1972		$ 250.00	$ 900.00

** 1150 QUESTS @ $3.00

Respectfully submitted,
John Woods
Chairman

INTERNATIONAL RELATIONS COMMITTEE

During the last decade there has been a strong surge of interest in the area of international physical education and sport. In the colleges and universities of the United States and Canada at least fifty institutions are now offering one or more courses in International-Comparative Physical Education and Sport. Many more are offering international units in other physical education courses such as the History and Sociology of Physical Education and Sport.

Many of our members are actively engaged in international programs in their respective colleges and universities, in activities sponsored by AAHPER, and in ICHPER Congresses. It is suggested that sabbaticals could well be used to develop reference materials and overseas contacts—two of our committee members are presently so engaged and will miss the Portland Conference.

The Committee members have corresponded frequently throughout the year with special attention given to a close scrutiny of the Operating Manual and the development of the current conference program. The Manual was found to be adequate by a majority of the committee members responding.

Last year's committee suggested that an item for priority consideration should be in the area of research developments in comparative-international physical education and sport. Two-thirds of the present conference program is devoted to the topic: "Research Methods and Techniques Applicable to the Study of International-Comparative Physical Education and Sport." For the other part of the program we are indeed fortunate in securing Dr. Ion Ioannides as a participant for the December 28th session. He is the former Director of Physical Education and Sport for Greece and is presently serving as Distinguished Visiting Professor at Sacramento State College, California. He will discuss "The Proposed Delphic Center of Physical Culture in Greece" and then show slides and discuss Grecian Physical Education and Sport.

The international relations committee will meet at Portland to consider ongoing projects for the coming year. A priority item appears to be the development of a body of knowledge in the area of Comparative Physical Education and Sport.

Respectfully submitted,
William Johnson
Chairman

LEGISLATIVE COMMITTEE

Action undertaken by the Committee for 1970 was as follows:

1) Thanks mainly to the efforts of President Hixson and the wonderful cooperation of some 55 NCPEAM members our legislative "pipe line" to disseminate information at the state level is near completion. We still need representatives from Delaware, Nevada and in Canada—Saskatchewan.
2) Marvin Eyler was appointed to serve as the NCPEAM Liaison on the AAHPER Legislative Committee. Burris Husman attended a meeting of this group in Washington on January 20. Report attached.
3) Three-hundred copies of President Hixson's remarks (attached) describing the values of House Bill #16101 were distributed to our state representatives. Participating response was excellent.

Respectfully submitted,
Frank Bearden
Chairman

TO:
Members of NCPEAM
FROM:
Chalmer G. Hixson, President
RE:
House Bill 16101

If you want to support graduate study, support House Bill 16101 by writing your Congressman something like this paragraph:

I urge you to co-sponsor and support House Bill 16101, which would provide for a more reasonable definition of the graduate student stipend, in Section 117 of the Internal Revenue Code of 1954.

At present, only the stipends of graduate students who do research, leading directly to an advanced degree are tax exempt. This bill would allow a graduate student, who teaches or performs services not leading toward an advanced degree, to exclude from his monthly gross income payments for these services up to $300.00.

I support this bill not only because it will provide tax relief for a part of our society living with restrictive income, but because I feel the stipend of a graduate student actually amounts to a form of scholarship. The graduate student teacher is first a student, then a part of the junior teaching staff. The small remuneration by the University for the essential teaching services provided by the graduate student reflects that consideration. Furthermore, there is substantial evidence to support the assertion that teaching and doing research are integral parts of a student's total graduate experience for which he is awarded an advanced degree.

As one of my representatives to Congress, I urge you to co-sponsor and support this bill of so much importance to every graduate student.

HISTORICAL RECORDS COMMITTEE

1) Elwood Craig Davis, AAHPER Archivist, has stressed "the current tragedy of our vanishing archives" in the profession of physical education. A study of the annual reports of the Historical Records Committee during the past nine years indicates that this group has maintained a consistent and determined effort to preserve important documents, papers, and correspondence of NCPEAM.

2) NCPEAM is fortunate to have an official archives center and an official archivist. The center is located in the Physical Education Library of the University of Illinois. NCPEAM Archivist is Professor A. C. Moore.

3) During the past year, Professor Moore has sorted through all of the files, item by item. He has removed materials which appear to have no historical value, and yet he has placed these materials in a separate file for a second and later evaluation.

4) Professor Moore and Professor Joanna Davenport, NAPECW Historian-Archivist, have been asked to serve as archivists for *Quest*. Professor Moore has removed all pertinent materials from the NCPEAM files and placed them in the *Quest* Archives.

5) The committee is considering the possibility of an oral history project. Various leaders, both present and past, may be called upon to record their views on NCPEAM and on professional issues.

6) As yet, the history of NCPEAM, especially since 1950, has not been written. This is a contribution which needs to be made.

Respectfully submitted,
J. Edmund Welch
Chairman

MEMBERSHIP COMMITTEE

The committee followed the plan for recruitment of new and emeritus members that former committees had established. In this plan the chairman assigned each committee member a number of states (usually in his geographical area); each state (with two exceptions) had a designated state chairman for membership through whom the committee members relayed information. The state chairmen were really the "key" in this plan, in that they were responsible for making the actual contact with the prospective members.

An organizational memo which presented the general plan for recruitment was mailed in early May, 1970, to all of the committee members. In October, 1970, a second memo was distributed which contained the final assignment of states (including Canada), the names and addresses of state chairmen (supplied by Dr. Hixson), a sample recruitment letter announcing the Portland convention and the other benefits of the NCPEAM, and a form for recommending emeritus members to the Executive Council. The committee chairman contacted C. E. Mueller and asked that a supply of membership flyers be sent to each committee member for distribution to their respective state chairman.

ASSESSMENT

As of November 23, 1970, our secretary-treasurer reported a total of 1,150 memberships. Seventy-four of these were emeritus, 906 were renewals and 170 were new memberships. The combined total of 1,150 represents a new membership record surpassing the all time high of 1,009 in 1968. It is expected that this figure will be improved as the new membership year continues.

The current committee members should be commended for their efforts. Much of the credit should also be given to the previous committee that was chaired by Donald Casady. Also, the numerous mailings to college and university departments of physical education by Secretary-Treasurer Mueller and President Hixson were of great assistance in this endeavor.

Very few problems were encountered by the membership chairman in implementing the described plan of action. It is therefore recommended that recruitment be continued by communicating through the designated state chairmen for membership. A continued effort should be made to appoint new members to the committee based on their strategic geographical locations for a more effective recruitment program.

Respectfully submitted,
D. Shelby Brightwell
Chairman

NECROLOGY COMMITTEE

In April 1970 the first letter to committee members informing them of the charge of the committee as well as presenting suggestions for fulfilling that charge was sent. Each member was assigned a specific geographical area to be canvassed for names of deceased past and present members. A follow-up letter was mailed in September. In November upon receipt of the names of additional deceased members from the Secretary-Treasurer, the chairman forwarded the information to selected committee members for purposes of obtaining the necessary information.

At the time of this report, nine deaths among the NCPEAM membership have been reported:

C. J. Alderson (honorary member)
Harold S. Edgar
Mitchell J. Gary (honorary member)
Richard E. Jamerson
Sidney Jenkins (honorary member)
F. William Kennedy
Walter J. Livingston (honorary member)
William H. Solley
Arthur H. Steinhaus (honorary member)

Information has been received and memorials have been prepared for Alderson, Gary, Jamerson, Kennedy, Steinhaus and Canute Hansen, an honorary member whose name appeared in last year's report but about whom no information was available at that time. Since then, information has been received and the memorial is included in this year's report. As information is received about the remaining deceased members, memorials will be written. The customary certificates will also be prepared and sent to the nearest of kin.

The chairman wishes to express his appreciation to the members of the Necrology Committee for their assistance as well as to other association members and friends who assisted in the work of this committee during the year.

Respectfully submitted,
Leo L. Gedvilas
Chairman

C. J. Alderson (1888-1970)

C. J. Alderson, or "Shorty" as he was known to all of his friends, was born on September 20, 1888, in Franklin, Kentucky. After his parents' death, he and three of his sisters moved to Hillsboro, Texas, to live with his uncle, Mr. W. P. Alderson. Shorty attended the public schools in Hillsboro, graduating from high school in 1912. He then entered The University of Texas, and, except for service in the U.S. Army during World War I, he continued his studies until he received B.A. and LL.B. degrees from the university in 1922. He later received the M.A. with a major in sociology from The University of Texas in 1932. Further study was done in physical education at Teacher's College, Columbia University. He received the M.A. in 1939 and the Ed.D. from that institution in 1949. During these years involved in studies at various institutions, he accumulated a total of 388 semester hours and five degrees. He began his teaching career in 1922 in Calvert, Texas public schools where he served as principal of the intermediate grades and was coach of all sports and the debating and declamation teams. He began his coaching and teaching career at The University of Texas at Austin in 1924 and served as assistant coach of the sports of football, basketball and track from 1924 to 1927. He served as freshman coach of these sports from 1927 to 1934. From 1931 to 1934 he was swimming coach and was largely responsible for swimming being accepted as an intercollegiate sport by the Southwest Conference. He joined the faculty of The University of Texas at Austin in 1939 as an Instructor in the department of Physical and Health Education and continued to serve as assistant football coach from 1942 to 1947. He retired from active teaching in 1959 and taught part-time when the need arose, the last assignment being in the spring semester of 1969-70. After his retirement he was married on September 2, 1959, to Dr. Mary Evelyn Buice, a member of the faculty, Department of Physical and Health Education, The University of Texas at Austin. Dr. Alderson is listed in "Who's Who in American Education" and "Who's Who in the South and Southwest." He was a member of Alpha Delta Kappa, Phi Delta Kappa and Kappa Delta Pi honorary societies. He was the recipient of the Honor Award of the Texas, Southern District, and the American Association of Health, Physical Education and Recreation. In 1960 he received the Golden Whale Award for his service in water safety to the American Red Cross. Shorty is best remembered for his honesty, integrity and exemplary conduct; he is best known for his hard work, fair play and courtesy, but most of all for his abiding faith in his fellow man. Few men have touched personally the lives of so many; and all who knew him became better persons because he passed their way.

Mitchell J. Gary (1900-1969)

Known to his host of friends as "Mike," Mitchell J. Gary died of a heart attack at his home on White's Road in Kalamazoo, December 30, 1969. Born April 17, 1900 in Winona, Minnesota, he served in the Marine Corps in World War I. Although he nearly became a lumberman, Mike decided to enroll at the University of Minnesota in 1924. There he earned All-Big Ten and All-American honors as an outstanding tackle on teams coached by "Doc" Spears and which included the famed Bronco Nagurski. Graduating in business administration he accepted the position of assistant football coach at Western Michigan University in 1928. The next year he became head coach and remained in that capacity through the 1941 season with his last team going undefeated. Overall his combined coaching record was a stellar 59-34-5.

During World War II, Mike Gary served in the navy as a lieutenant commander. California Naval Preflight School, Delmonte, Iowa Preflight, and the Sand Point N.A.S., Washington, were stops on his war-time sojourn. During this period Mike assisted in the development of the U.S. Naval Institute training manuals. His name appears as a co-author in CONDITIONING; EXERCISES, GAMES, TESTS, a book prepared for the V-5 program.

When hostilities ended, Mike returned to Western Michigan and assumed duties as associate director of athletics and in 1949 became the Director of Athletics upon the death of his predecessor, Judson Hyames. October 8, 1966, "Mike Gary Day" was observed with the members of his 1941 team returning to honor him in his final year before retirement in 1967. The occasion included the gift of a new automobile. As further recognition of his contributions to the University, the physical education complex was named "The Gary Center." His leadership and belief in a strong balanced program is evident in the Western Michigan of the 1970's. The University president stated that while Mike had made his mark professionally ". . . in coaching and in directing athletic programs, he will best be remembered at WMU, and throughout this community, for his understanding, compassion and empathy with both the University and community youth. The impact of Mike Gary will long be felt." The reference to community impact was not undeserved. Mike served for 40 years as Past President, Secretary, and Editor to the Downtown Kiwanis of Kalamazoo.

Although possessing a serious side, Mike had a keen wit and loved a good story. Journeys to professional meetings and athletic contests were enlivened by the quality of the conversation of which he was very much a part. As a Master of Ceremonies he had few peers. The University of Michigan and Michigan State alumni clubs of the Kalamazoo area invited Mike to serve as toastmaster for their Crying Towel luncheons for 22 consecutive years! Among some contemporaries Mike was known as the poet laureate of the profession. It was not unusual for him to fill four to five pages of a legal pad with an ode to be used for introducing speakers before service clubs or banquets. His poems included references to music, history, philosophy, sports, etc., and were guaranteed laugh inducers.

Among his colleagues at Western Michigan, Mike was known as the hardest working man on campus. A capable, respected administrator, his physical stature aided him to lead by example. Those who worked closely with him were always aware of the gentleness and compassion which were an integral part of his makeup.

It is typical that the last journey Mike took was to attend the NCPEAM meeting in Chicago. A day later he was dead. Mike Gary cast a long shadow. He left a legacy of pride, professionalism of the highest quality, and community service. His is a legacy which the staff of the Department of Physical Education and Athletics cherishes. Bob Wagner of the Kalamazoo Gazette concluded, "Mike Gary is gone but he never will be forgotten as long as there is a Western Michigan University or a city of Kalamazoo." Can one leave a more fitting memory?

His wife, Helen, and two daughters and a son survive.

Canute Hansen (1883-1965)

Dr. Canute Hansen, retired dentist and Professor Emeritus of the Baruch School of Business and Public Administration of the College of the City of New York, was born November 2, 1883 and died April 16, 1965. His parents were poor, uneducated people from Denmark. As a boy of 11, Canute Hansen began to work and attended school at night. All of his formal education, with the exception of Dental School, was completed at night. It was during his dental training that he married, after which his wife worked to help him remain in and complete his training.

In appearance Dr. Hansen was wiry and of medium height. He had been New York State lightweight wrestling champion in his youth. He was also an excellent gymnast and acrobat who was able to establish extremely fine rapport with young people—an important factor which aided in experiencing successful dual careers.

One of his first Physical Education teaching positions was at the Popinheusen Institute in College Point, Long Island. Since a degree was not necessary to teach Physical Education in those days, he won the position by virtue of his proficiency in gymnastics. Later at the City College, he was an untiring proponent of a sound program of physical fitness. He made it a requirement that every student physically able learn to swim. His avid interest in student safety resulted in the experimentation and manufacture of a safety boxing mask in 1937. Upon his recommendation, all students who participated in intercollegiate or intramural boxing bouts were required to wear the mask.

For many years the Department of Hygiene and Physical Education at the Baruch School was voted by the students as the department that contributed most to student welfare. As a token of appreciation for Dr. Hansen's many efforts and accomplishments, the gymnasium became known as "Hansen Hall."

During the years 1917-1919 he served as a commissioned officer in the United States Navy. For thirty years he was a dental consultant and lecturer to the New York Police Department in which he also maintained the rank of Police Sergeant.

Dr. Hansen taught Physical Education and Hygiene and later was Head of the Department at the college from 1907 until 1954. Upon his retirement the faculty of the school awarded him a testimonial for "forty-seven years of vital and creative contribution to the welfare of the college."

He became a member of the Association in 1925 and was awarded honorary membership upon his retirement.

Surviving are four daughters, fourteen grandchildren, and four great grandchildren.

Richard E. Jamerson (1910-1970)

Richard E. Jamerson, Chairman of the Physical Education Department at the University of North Carolina, Chapel Hill, died at his home on July 15, 1970 of an apparent heart attack.

Dick came to Chapel Hill in 1938 from Oberlin College, where he had taught physical education and coached swimming, baseball and football. He served as varsity swimming coach at Carolina from 1938 until 1953, while teaching in the Physical Education Department. In his coaching career he coached many championship teams and individuals. He became Chairman of the Department in 1966.

A native of Texas, Dick attended Sewanee Military Academy, and graduated from Rice University in 1932. He received the Master of Arts and Doctor of Education degrees from Teachers College, Columbia University. His teaching career included positions in the Houston, Texas public schools, Oberlin College, Columbia University, Brooklyn College, University of Houston, and University of Colorado.

He served as Executive Secretary and Editor of the *Proceedings* of the National College Physical Education Association for Men from 1952 to 1960, and as President of that organization in 1962. Other elective offices included the presidency of the North Carolina AHPER, and of the College Swimming Coaches Association. He was a member of the NCAA Swimming Committee, the Olympic Water Polo Rules Committee, and of numerous committees of the AAHPER.

An active participant in community affairs, he was President of the Chapel Hill Kiwanis Club, a member of the Recreation Commission, the Chapel Hill Board of Education, and chairman of the American Red Cross Water Safety Program. He was an active member of the Chapel of the Cross Episcopal Church.

He received the Honor Award of the Southern District, AAHPER, in 1962, and the Pop Warner Distinguished Achievement Award for Service to Youth in 1959.

On the University campus his perceptive mind and genial manner led him into many official appointments, as well as into contact with hundreds of students and faculty. He served on the Faculty Council, the Buildings and Grounds Committee, the administrative boards of the General College and School of Education, and he had excellent rapport with the Department of Athletics. His office was always open to students and faculty, and he was always willing to listen to individual comments, requests, or criticism. He believed that students should be encouraged to plan and organize their recreational pursuits, but was always willing to support their projects with departmental guidance and availability of facilities and equipment. He was a keen competitor, himself, whether on the golf course or in the matching of wits over the discussion of an educational theory, and his influence in the challenging of perceptive thought will be remembered by students and professional colleagues.

Surviving are his wife Anna, his daughter Ann Lou, a member of the Physical Therapy staff of North Carolina Memorial Hospital, Chapel Hill, and son, James, Captain, United States Air Force.

F. William R. Kennedy (1917-1970)

A long time member of the NCPEAM Frances William Russell Kennedy, Director of the School of Physical Education at the University of Manitoba, passed away suddenly of a heart attack on February 20, 1970.

Dr. Kennedy was born in Lyleton, Manitoba, in 1917. After graduating from Brandon College in 1935 he taught at Russell, Manitoba; Shoal Lake, Manitoba; and at the Gimli Leadership Camp.

From 1941 to 1945, he served in the Canadian Armed Forces as a Sports Director in Canada, the United Kingdom and Italy. Following the war he entered the University of Toronto. He graduated from that institution with a Bachelor of Physical and Health Education degree in 1947, and went to the University of Manitoba as a staff member in the then Department of Physical Education, Recreation and Athletics. He obtained an M.A. degree from Columbia in 1950 and a D. Ed. degree from the same institution in 1955.

Through the years, he served as Chairman of the Department, Union Director, and finally, Director of the School of Physical Education when it was established in 1964.

Dr. Kennedy's leadership through these years was instrumental in bringing about the B.P.E. degree program at the University of Manitoba and the growth of needed facilities and programs in all areas of physical education.

His affiliations and honors through the years were many. He was three times President of our Western Canadian Intercollegiate Athletic Association, President of the Canadian Intercollegiate Athletic Union, Member of the Foreign Relations Committee of the National College Physical Education Association, President of the Canadian Association for Health, Physical Education and Recreation (Manitoba Branch) and recipient of an honor award from that organization.

His doctoral dissertation entitled "Physical Education and Recreation in Canada; A History of Professional Preparation" contributed new historical background for our profession. As Chairman of a Committee to Study Needs in Physical Education and Recreation in Manitoba he was responsible for the 1958 report, *Physical Education and Recreation in Manitoba*—a report which had strong positive influence on the direction of Physical Education in the province. He was also a contributing author for the publication *Physical Education in Canada.*

Noted for his creative ideas and good humor, Frank Kennedy was devoted to the service of his University, his community, and the profession of Physical Education. He will be much missed by his many students, colleagues and friends.

Arthur H. Steinhaus (1897-1970)

Arthur H. Steinhaus, eminent physiologist, educator, scholar, author, lecturer, and administrator, died in Lansing, Michigan, February 8, 1970, after an extended illness. Born in Chicago, he was educated in schools of that city, and upon receiving his diploma from George Williams College he joined the faculty in 1920 as instructor of biologic sciences. He became professor of physiology in 1928, director of the Division of Health and Physical Education in 1953, and in 1954 he accepted the post of Dean of the Faculty, which he held until retirement in 1962. While a young instructor he continued his education, receiving both the bachelor and master of physical education degrees from George Williams College and the bachelor and master of science and the doctor of physiology degrees from the University of Chicago.

His inquisitive mind was ever alert to new ideas, new theories, new methods. He believed that "anything that throws light on how the habits of living affect health and performance is our field of research and teaching." He early became interested in research and his work in the physiology of muscle, blood, and exercise has been read and respected the world over. He became greatly concerned about the dangers of boxing and smoking and long before the subject gained popular attention he researched, wrote, and lectured on the dangers to the human body. In the last fifteen years he did extensive studying and research in relaxation.

His energy, enthusiasm, and indomitable zest for life was contagious. He had an uncanny capacity for making friends and for getting on easy terms with people. No problem was too small or too large to deserve his attention. His office door was always open and of the many who entered most left with new hope, a new challenge, or a solution to their problem. He inspired students to want to learn and to question. He expected excellence from himself as well as of others, and he challenged those whose lives he touched to reach for excellence.

He was very active in numerous international, national, regional, state, and local professional groups, and believed that it was important to take an active interest in them. Thus, he served terms of office as vice-president of the AAHPER national organization and president of the Midwest and Illinois chapters; president of the American Academy of Physical Education; and vice-president of the American College of Sports Medicine. He was in constant demand for committee, council, and consultant appointments and he served for agencies and organizations such as the U.S. Office of Education, U.S. Navy, YMCA, U.S. Olympic Committee, and many universities here and abroad.

Internationally renowned in physiology, he served as Fulbright professor to Germany and Japan, did research in Germany and Denmark, and lectured and taught in universities, colleges, and before professional groups around the world. His lectures were always interesting, factual, and stimulating—and spiced with his fine sense of humor. Many of his writings appeared in professional journals as well as popular magazines.

His outstanding professional leadership and research brought him numerous awards, including the AAHPER William G. Anderson Award in 1951 and the Luther Halsey Gulick Award for Distinguished Service in 1969; appointment as a Fellow of the John Simon Guggenheim Memorial Foundation, the only physical educator to receive this award; the American Academy of Physical Education Clarke Hetherington Award in 1963; and the American College of Sports Medicine Honor Award in 1965.

After a terminal sabbatical leave he returned to the College to serve as the Oscar G. Mayer Distinguished Professor of Psychophysiology from 1963 to 1965. The following year he served as Distinguished Service Professor of Physiology at the Chicago College of Osteopathy, before accepting a post-retirement position as Visiting Professor at Michigan State University.

Arthur H. Steinhaus will long be remembered as one of the most outstanding leaders of our times, and as a most inspiring teacher and a warm, personal friend. His concern was for each human life. He cultivated an environment for excellence wherever he went and his personality and philosophy left a permanent imprint on those whose lives he touched. His life will live on in those he taught and who are now teaching others.

OPERATING CODES COMMITTEE

Business of the Operating Codes Committee of the National College Physical Education Association for Men was conducted according to the operating code of the Operating Codes Committee found in the Operating Manual of the NCPEAM.

In a memorandum dated March 30, 1970, all officers, section chairmen and members of the Operating Codes Committee were polled for suggestions concerning needed changes in the Operating Codes to provide a more efficient operation of the organization. It was requested that all changes be submitted by October 1, 1970, in order that the Committee would have an opportunity to study the proposed changes and make recommendations.

On the recommendation of the Executive Council, two changes (3i, 3j) are suggested by the Operating Codes Committee. These changes are as follows:

1) The operating codes of the Constitution Committee and the operating codes of the Operating Codes Committee both state that the chairman of these respective committees is to serve as Parliamentarian. To correct this conflict, paragraph 3i of the Constitution Operating Codes and paragraph 3j of the Operating Codes Committee were eliminated. Those paragraphs read as follows:

   3i "The Chairman shall be available to serve as Parliamentarian at all official meetings of the Association and the Executive Council if requested by the President."

   3j "The Chairman shall serve as Parliamentarian for all meetings of the Executive Council and the Association."

2) At the meeting in Seattle President Chalmer Hixson asked that the Operating Codes Committee look particularly at Section 1d on page three and four of the Operating Codes Manual. This section reads as follows:

   1d "Commit itself and its membership to a policy of aggressively seeking to recruit into physical education an increasing number of qualified young people who are interested in the behavioral sciences, in the humanities, and in communication skills. Further that such young people should be permitted modification of their undergraduate curricula and be guided into graduate programs adapted to developing their special skills in the interests of research, philosophy, and interpretation related to physical education. The National College Physical Education Association for Men shall assign to a standing committee or to a special committee the task of conducting a year-round program designed to implement this resolution and to discover and report specific instances in which progress had been made with respect to its execution."

It is recommended that this section be amended to read as follows:

"Commit itself and its membership to a policy of having each individual member assume some responsibility to recruit into physical education an increasing number of qualified young people who are interested in the behavioral sciences, in the humanities, and in communication skills. Further that such young people should be permitted modification of their undergraduate curricula and be guided into graduate programs adapted to developing their special skills in the interests of research, philosophy, and interpretation related to physical education."

Since the Association has never had a committee on recruitment, please note that the last sentence of paragraph 1d has been eliminated.

(For the benefit of the members of the association, I would like to report that two members of the Operating Codes Committee had some reservations

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* Underscore is change.

about leaving the responsibility of recruitment up to individual members—which they believe a professional person would do anyway, and suggested that perhaps the association should appoint a committee and actively recruit members into the profession.)

3) It was called to the attention of the chairman of the committee by Robert Singer, Chairman of the Research Committee, that the Research Committee does not have an Operating Code. It was recommended that the Committee develop a code and submit it next year to the Operating Codes Committee.

4) In early November, I received a letter from Jack Schendel, Chairman of the Policy Committee, pointing out six or seven additional conflicts and proposed changes in the operating codes. Because of the time required to make these changes and secure the approval of the Operating Codes Committee, this letter will be referred to the next chairman of the Operating Codes Committee for action.

A special thanks should go to those members who reported errors in the Operating Codes and submitted those to the Operating Codes Committee. I greatly appreciate the prompt response I received from the Committee.

Respectfully submitted,
Burris F. Husman
Chairman

POLICIES COMMITTEE

The business of the Policies Committee of the NCPEAM was conducted by correspondence as permitted by the operating code of the Policies Committee.

A memorandum mailed in May to NCPEAM officers, section chairmen, and chairmen of standing committees requested that they review the existing policies of the NCPEAM from the perspective of their offices, sections, or committees and submit by October 15, 1970, suggested additions or revisions which would render their work more effective or efficient.

Paragraph 1e under the section heading "Achieving Association Purposes" of the NCPEAM Policies, provides that "the Association shall conduct a biennial poll of all active members to obtain ideas for new policies or revisions." In keeping with this directive, the Policies Committee solicited the ideas of the membership concerning new policies or revisions through a notice in the May issue of the *NCPEAM Newsletter.*

After consideration of the responses from members of the NCPEAM and its own careful review of existing policies, the Policies Committee has voted unanimously (6-0) to recommend to the Association the following changes in the NCPEAM policies:

Achieving Association Purposes

Delete references to health education and recreation except where they are logically and directly related to the intent of the policy statement as it pertains to physical education.

Delete references to health education and recreation in the following paragraphs of this section: 1c, 2a, 2b, 2d, 2f.

Paragraph 1b: Change to read as follows (underlined words are added): Support all efforts aimed at establishing desirable athletic practices at each educational level to the end that physical education can make its maximum contribution to the welfare of all students as well as each participant."

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* Underscore is change.

Paragraph 1d: Delete this entire paragraph. The provisions of this paragraph have not been and are not now being implemented. Therefore, it seems appropriate to delete the entire paragraph.

Shift existing paragraph 1e down to paragraph 1f and *insert (add)* the following paragraphs as 1d and 1e:

1d: "Use its influence to support the development of specific professional preparation programs for coaches and the establishment of certification standards for coaches."

1e: "Encourage the integration of men's and women's programs of physical education whenever possible."

Add paragraph 3d: "Encourage all colleges and universities to offer physical education instruction as a part of their academic curricula."

Administering Association Affairs

Delete references to health education and recreation in the following paragraphs of this section: 2a, 7a.

Delete paragraph 2g (since provision will be made for special interest groups at each convention).

Add paragraph 3e: "Omit references to health education and recreation in the operating codes of the various committees, sections and other units of the NCPEAM, except where they are logically and directly related to the description of the unit and where they are necessary for understanding its function."

Add paragraph 4f: "Prohibit the use of Association stationery, membership lists or mailing privileges except to professionally related organizations.

Add paragraph 5d: "Sponsor and operate a placement service for its members at the annual meeting."

Add paragraph 6d: "Develop and preserve a photographic history of highlights of each annual meeting which shall become a part of its historical documents."

Respectfully submitted,
Jack Schendel
Chairman

RESEARCH COMMITTEE

Our progress report is as follows. The listing of research specialists has been published by the NCPEAM in September. The evidence was distributed to all NCPEAM Members. I have asked Pat Mueller to distribute this information to state departments of education, junior colleges, and city and community public school systems, and hope that the Association supports this plan. This *Research Specialists* handbook should be revised and updated annually.

On the second project, concerning latest course and curriculum innovations, I have acquired some materials from some schools. The response was not at all overwhelming. The materials I have received range any where from one page letters to brochures and school bulletins. I think the only way to disseminate this information would be to make the President or Secretary-Treasurer of the NCPEAM the holder of such material. Announcements could go out that this material is available to any individual or group or school requesting it. Then the material could be forwarded from that central office upon request. This should be the process of acquiring information about innovations in curricula and it should be an on-going matter. Hopefully, my successor will keep this going. Anyway, I would suggest that someone be made responsible for maintaining the file and then possibly give publicity to the fact that it is available upon request.

A problem exists with the final project, dealing with research laboratories throughout the country and the type of equipment within them. It would be desirable to have available an annual up-dated publication concerning the nature of the physical education research laboratories throughout the U.S. and Canada. Unfortunately, the cost to NCPEAM may be prohibitive. I took the initiative to write to a number of laboratory equipment companies, as well as the Athletic Institute and all of them complained that severe budget cut-backs would not enable them to publish a newsletter or brochure containing this information. They all sounded very optimistic about its value and were quite apologetic about not being able to lend support. So we stand now with piles of information concerning the laboratories but no way of disseminating it without a cost to NCPEAM. I could make a few suggestions as to other ideas: (1) we can continue to try to get a sponsor from a laboratory company of book companies: (2) I could or NCPEAM could try to publish it with a local company and charge the universities for the publication and hopefully will come out even or with a slight profit: (3) somehow or other NCPEAM could sponsor the publication itself.

The matter of an Operating Code for the Research Committee needs examination. The Research Committee of NCPEAM should probably develop its own Operating Code. Therefore, it is suggested that this Code be initiated with the NCPEAM Meetings in December, written up in the following months, and presented at next years meetings.

Respectfully submitted,
R. N. Singer
Chairman

RESOLUTIONS COMMITTEE

ONE

WHEREAS, the National College Physical Education Association for Men has recognized and commended the work of the council in the past, and

WHEREAS, this Council could increase its effectiveness with new ideas and input from professional personnel in the field of physical education, therefore, be it

RESOLVED, that the NCPEAM pledge its most competent professional physical educators to assist in any way with the direction and implementation of the efforts of the Council to continue its positive promotion of physical fitness and sports.

TWO

WHEREAS, the need for each of us to support the National Foundation for Health, Physical Education, and Recreation is great and,

WHEREAS, the Foundation needs to strengthen its financial structure to more effectively promote plans and projects, therefore, be it

RESOLVED, that the membership of the NCPEAM be encouraged to join the Foundation as a means to support its work.

THREE

WHEREAS, that college physical education has the same objectives for women as for men, and

WHEREAS, that college programs of physical education for men and for women should be integrated as much as possible,

WHEREAS, that the NCPEAM endorses the efforts of colleges and universities to combine men's and women's classes, programs, and departments, therefore, be it

RESOLVED, that the NCPEAM invite the NAPECW to join together in future national meetings.

FOUR

WHEREAS, this has been a highly successful meeting, and

WHEREAS, provision for transportation, boarding, housing, and recreation of the members of the Association was effectively planned and carried out, therefore, be it

RESOLVED, that the members of the NCPEAM extend their sincere appreciation and thanks to:

The management and employees of the Portland-Hilton Hotel, Portland, Oregon,

The Convention Manager, Lee Ragsdale, his committee, and faculty and officials of Portland State College,

The Program Chairman, officers, program participants of the Association, and all others who cooperated to make this meeting a success.

Respectfully submitted,
William Penny
Chairman

President's Committees

TIME AND SITE COMMITTEE

1) It is our recommendation that the city of Pittsburgh, Pennsylvania be selected as the site for the convention and that the dates January 6-9, 1973 be considered.

2) Dr. Karl Oermann and Dr. Carl Peterson, both of the University of Pittsburgh, have invited us to that city and pledge the cooperation of their University in every way possible. Dr. Oermann has discussed the possibility of the convention with hotels in Pittsburgh and indicates that the dates recommended would be possible.

Respectfully submitted,
Dominick Taddonio
Chairman

COMMITTEE TO STUDY ETHNICAL PROBLEMS

The Committee did not function as a committee because the chairman failed to communicate with the other committee members.

The chairman did (1) send a personal letter with the Association brochure to the Director of Physical Education or Director of Athletics of fifty-six colleges and universities where the staff is predominantly Black, and (2) speak to approximately forty Black college directors and instructors at the N.C.A.A. National Summer Youth Sports Program Project Directors' Conference in November. Both actions urged increased membership and participation in the affairs of this Association

It is the recommendation of the undersigned that this committee be continued with the initial efforts directed toward increasing the membership. As of April 1970, there were fewer than twenty Black members in the Association.

Respectfully submitted,
Jesse L. Parks
Chairman

COMMITTEE TO STUDY FISCAL RESOURCES

This committee was charged by President Hixson to recommend possible means of increasing revenue for the Association.

Because of geographical distribution of the committee, the work was done by mail. The chairman, after consultation with President Hixson, requested opinions of the committee on certain methods of increasing income, as well as asking the committee for other possible methods.

As might be expected, opinions were varied on the methods of improving the financial picture. There were some trends in the thinking, however, and there were some excellent suggestions set forth by committee members. All eight of the committee members responded. The results of the survey are submitted and recommendations are as follows:

1) All favored encouragement of philanthropic giving.
2) All favored encouraging members to put the association in their wills.
3) All favored expanding the membership.
4) Five members favored a convention registration fee.
5) Five members favored raising the dues and the suggested range was from $2.00 to $10.00. Two members gave a qualified yes.
6) One member suggested the encouragement of members to give more than the dues by providing for this in the dues form.
7) There were two strong suggestions for NCPEAM and the Women's College Association to merge.

The chairman's interpretation of the survey results and recommendations to the president are as follows:

1) There should be effort put forth in the solicitation of philanthropic gifts and inclusion of the Association in wills.
2) A constant effort to increase membership is important.
3) The possible merger of the men's and women's associations should be seriously considered.
4) A convention registration fee should be considered but there was strong opposition to it (three of eight committee members).
5) Since there was only one definite "no" from the eight committee members in the area of raising dues, it is recommended that the association move in this area. The amount of the raise should be determined after consultation with the treasurer.

The chairman is appreciative to all committee members for their help in this project.

Respectfully submitted,
Richard D. Gordin
Chairman

COMMITTEE TO STUDY RESTRUCTURING AND NEW DIRECTIONS FOR NCPEAM

Considering the important charge given this committee, the fact that it was not fully constituted until 9 March, the difficulties of doing committee work by mail and during the summer, and the failure of the membership to respond to invitations in the *Newsletter* to contribute their thoughts, the chairman is aware that the committee's report may not be as reflective of the membership's desires as it should be. However, the committee members have reached some conclusions which they think are worthy of consideration by the membership.

In general, the committee is agreed on the following points:

1) That NCPEAM should *not* become as fragmented with sections and divisions as so many of our other professional organizations have become.

2) That the structure of NCPEAM, as reflected by the Executive Council and the formal program for the annual meetings, involve only what are considered the *major* divisions of a somewhat broadly conceived college *physical education* program.

3) That the annual meeting be planned to provide a means to truly stimulate those members attending and to provide for a freedom of exchange among them.

4) That a fairly sizeable piece of the total time allowed for the annual meeting be set aside for special interest groups so that members who wish to discuss some fairly specific aspect of the college physical education program can do so without missing the regular program or interfering with the other aspects of the annual meeting that make it so valuable to many of our members.

5) That the present scheduling procedure of the annual meeting be continued.

More specifically, the committee recommends the following:

1) That NCPEAM's official structure consist of the following sections:
   a. Basic Instruction
   b. Professional Preparation
   c. Competitive Sports
   d. Research

2) That each of the above-listed sections would be allotted two 1½-hour sessions at the annual meeting. *Each session would be devoted to a central topic or theme.* There would be one or more formal presentations but ample time would be allowed for member participation.

3) That there be no more than two general sessions and that these deal with a subject of interest to all college physical educators and one which should not only inform them but which should also challenge them. Hopefully, the presentations (or at least their main points) could be duplicated and available at the beginning of the session meeting so members could react to them following the presentation and take them away to make use of them before the *Proceedings* are received.

4) That there be at *least* one and possibly two periods of time (1½-2 hours) set aside for meetings of special interest groups.

5) That the business matters to be presented to the membership be handled in one general session meeting devoted entirely to business affairs.

6) That all committee reports be duplicated and distributed to members at the time of registration and the only oral reports given at the business meeting would be for those matters requiring a decision by the members. However, members would be given an opportunity to raise questions concerning the written reports if they desired to do so.

7) That the annual meeting should not extend any longer than 2½ days; there be no formal night meetings; and there be a 30-minute period between session meetings.

Respectfully submitted,
Wayne B. Brumbach
Chairman

COMMITTEE TO STUDY THE ROLE OF JUNIOR COLLEGES IN NCPEAM

The President's Committee to Study the Role of Junior Colleges in NCPEAM met initially at Macon Junior College, Macon, Georgia, for its first meeting.

After the initial groundwork was set, it was the consensus of the group to formulate a survey instrument in the form of a questionnaire for the purpose of securing some pertinent information in relation to our task. The group aspired to send these questionnaires to the following groups:

1) All present junior college members,
2) Past junior college members, and
3) An equal number of senior college members.

The instrument was constructed in three parts—Part I was involved with general identifiable personal data; Part II was concerned with NCPEAM information purported to be pertinent; and Part III included program information. There were fourteen evaluative statements and questions presented to the respondents.

The number of questionnaires returned for evaluation numbered seventeen junior colleges and twelve 4-year colleges and universities.

Tallies of responses were made of the two groups (junior colleges and 4-year colleges and universities). An analysis of the data was made by the utilization of percentages that were tabulated for each possible response.

(Note: Statistical results may be obtained from the chairman)

In addition, for junior colleges, one respondent indicated the "great" need for articulation between junior and senior colleges for recruitment. Another respondent indicated "much" need for articulation between the two groups in relation to the credit given for courses.

An additional response for 4-year institutions consisted of the indication for the "much" needed articulation between junior and senior institutions relative to financing.

It is our recommendation that the membership of NCPEAM study carefully the results of this project and take appropriate action to ameliorate any possible lack of communication and understanding between junior colleges and 4-year institutions.

Respectfully submitted,
Millard J. Fisher
Chairman

Joint Committee

JOINT COMMITTEE ON PHYSICAL EDUCATION AND ATHLETICS — NCPEAM, NCAA, AAHPER

1) The Joint Committee members have agreed that an urgent need exists for clarification and agreement among the involved agencies relating to the concept of Olympic Development. The Committee joined the AAHPER in proposing to the United States Olympic Committee the establishment of a Joint Committee of Olympic Development.
2) The need to continue efforts to implement plans for the certification of high school coaches was discussed by the Committee. Implementation efforts are proceeding, though it is a slow process since it must

be accomplished through individual state Departments of Public Instruction. Minnesota and Illinois now have some form of certification requirements and Ohio will soon institute their own requirements.

3) The Operating Code of the Joint Committee is unclear in regard to the terms of office for its members. Necessary changes are being drafted and will be submitted to each of the organizations.
4) The Joint Committee has been concerned about the professional status (tenure) of coaches who do not have the professional preparation in physical education.

A Committee has been formed to develop a position statement concerning appropriate tenure for coaches that will not jeopardize the status of the Physical Education Department as far as their accreditation is concerned.

The Committee members are individuals who have responsibility for the administration of athletic and physical education programs and representatives of the various collegiate coaches associations.

A preliminary draft of committee suggestions is contained in Enclosure A. It was further suggested that this Committee might work in conjunction with the Professional Preparation Panel of the AAHPER as they are concerned with evaluative criteria in health, physical education, recreation and athletics.

The Committee is charged also with developing a self-evaluation tool which would be geared to three different phases of the college program:

1) Intercollegiate athletic programs
2) General physical education required programs
3) Professional preparation programs for physical educators and athletic coaches.

Respectfully submitted,
Carl W. Selin
Chairman

Dear Colleague:

The Joint Committee on Physical Education and Athletics has been concerned about the professional status (tenure) of coaches who do not have professional preparation in Physical Education. A subcommittee was formed to develop a position statement concerning appropriate tenure for coaches that will not jeopardize the status of the Physical Education Department as far as their accreditation is concerned. The first meeting of this subcommittee was held in Washington on Monday, December 14. A draft of the results of the subcommittee's discussion is attached for your review and comments.

Coaches who are employed in intercollegiate athletic programs generally have responsibilities which may be classified as follows:

1. Entirely within the intercollegiate athletic program.
2. Combination coaching of intercollegiate athletics and teaching general skill courses within the required physical education program.
3. Combination coaching of intercollegiate athletics and teaching in the professional preparation program for physical educators and athletic coaches.

SUGGESTIONS CONCERNING HIRING AND RETENTION QUALIFICATIONS OF PERSONNEL WITH COACHING RESPONSIBILITIES

1. Responsibilities entirely within the intercollegiate athletic program.
   A. Qualifications consistent with policies of individual schools.

2. Combination coaching of intercollegiate athletics and teaching general skill courses within the required physical education program.
   - A. Potential for reasonable teaching competence as evidenced by a major or minor in the field of professional preparation.
   - B. Demonstrated teaching ability in the academic area in which one is employed to teach.
   - C. Joint approval of the departments involved concerning contracts and assignments as evidenced by time allotment and salary percentages.
   - D. Evaluation of performance is the responsibility of the administrative head of the unit in which work is performed.
   - E. Unsatisfactory performance as determined by the administrative head of either unit may result in termination of employment in that respective unit.
3. Coaching of intercollegiate athletics and teaching in the professional preparation program for physical educators and athletic coaches.
   - A. Should be employed with faculty status.
   - B. Potential for reasonable teaching competence as evidence by a major in the area in which he is employed to teach.
   - C. Joint approval of departments involved concerning contracts and assignments as evidenced by time allotment and salary percentages.
   - D. Evaluation of performance is the responsibility of the administrative head of the unit in which the work is performed.
   - E. Unsatisfactory performance as determined by the administrative head of either unit may result in termination of employment in that respective unit.

Please send me your thoughts and comments concerning this preliminary draft. My very best wishes for an enjoyable holiday season.

Cordially,

Warren K. Giese, Ph. D.
Member, Joint Committee on Physical
Education and Athletics

WKG/no

Address: Department of Physical Education
School of Education
University of South Carolina
Columbia, South Carolina 29208

CONSTITUTION
NATIONAL COLLEGE PHYSICAL EDUCATION ASSOCIATION FOR MEN

ARTICLE I—NAME

Section 1—The organization shall be known as the NATIONAL COLLEGE PHYSICAL EDUCATION ASSOCIATION FOR MEN.

ARTICLE II—OBJECTIVES

Section 1—Objectives of the ASSOCIATION relate to the advancement of physical education in institutions of higher learning, including: the basic instructional program; intercollegiate athletics; intramural athletics; research; teacher education; and such other activities as may be assigned to a given college department. More specifically, the objectives are:

a. To improve the contributions of physical education, and where appropriate, the related fields of health education and recreation, to higher education.

b. To identify and define major issues and problems confronting the profession, particularly those of higher education, and resolve them to the best possible ends.

c. To gather, analyze, interpret, and organize the research needed to resolve the major issues and problems facing the profession of physical education, especially those which are concerned with higher education.

d. To develop interdisciplinary relationships with kindred fields of knowledge for the light they may shed on the nature and values of physical education (e.g., anthropology, psychology, sociology, sports medicine, etc.).

e. To improve public relations through increasing public understanding of the nature and purposes of physical education in American and world life.

ARTICLE III—MEMBERSHIP

Section 1—The ASSOCIATION shall consist of members as hereinafter provided.

ARTICLE IV—GOVERNMENT

Section 1—The government of the ASSOCIATION shall be vested in an Executive Council, officers, committees, and members as hereinafter provided.

ARTICLE V—WESTERN DIVISION

Section 1—The Western College Men's Physical Education Society, consisting of college physical educators in the thirteen western states, shall be known as the Western Division of the National College Physical Education Association for Men (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, Washington, and Wyoming).

ARTICLE VI—SECTIONS

Section 1—The ASSOCIATION may establish sections within its organizational structure as hereinafter provided.

ARTICLE VII—MEETINGS

Section 1—The ASSOCIATION shall conduct annual and special meetings as hereinafter provided.

Section 2—Robert's Rules of Order shall govern the conduct of all business of the ASSOCIATION not covered in this Constitution and By-Laws.

ARTICLE VIII—AMENDMENTS

Section 1—This Constitution may be amended at any regular or special meeting of the ASSOCIATION, or by mail vote. A favorable vote of three-fourths (3/4) of the members present at a regular or special business meeting, or a majority of the current membership by mail vote, shall be required for amendment; no mail vote shall be valid beyond thirty (30) days after official notification. In either case (regular or special meeting) a quorum must take action as hereinafter provided.

BY-LAWS

ARTICLE I—MEMBERSHIP AND DUES

Section 1—There shall be two (2) types of membership: active members and emeritus life members. All members shall have equal voting privileges.

Section 2—Active members are men actively engaged in teaching or administering one or more components of college physical education, men with teaching experience pursuing graduate study, or men engaged or interested in allied fields.

Section 3—Active membership dues shall be ten dollars ($10.00) per fiscal year—as provided in Article XI, Section 5—payable to the Secretary-Treasurer upon official notification by him. Members delinquent in their annual dues for a period of one (1) year shall be dropped from the rolls; re-instatement consists of paying the annual current dues.

Section 4—Emeritus membership may be conferred upon members by a two-thirds (2/3) affirmative vote at a regular business meeting. An individual must be a current member at retirement and have a minimum membership of 15 of the last 20 years. Emeritus members shall enjoy all the rights and privileges of active members but will not pay dues.

ARTICLE II—EXECUTIVE COUNCIL

Section 1—The Executive Council shall consist of the President, President-Elect, the immediate Past President, the Secretary-Treasurer, one (1) Member-at-Large, and all elected Section Chairmen as provided in Articles III, IV, and VI below. All members of the Executive Council shall have equal voting powers. Any person holding office in the ASSOCIATION must be an active member.

Section 2—The Executive Council shall manage the general affairs of the ASSOCIATION, except as hereinafter specified. These general affairs shall consist of: (a) fulfilling directives given to it by the membership at the annual business meeting, or by mail vote; (b) presenting matters of policy to the membership at the annual business meeting, or by mail vote, for adoption or ratification; (c) acting for the ASSOCIATION between annual meetings; (d) maintaining an active professional program through the year; and (e) making appointments to fill vacated offices not otherwise provided for.

ARTICLE III—OFFICERS AND DUTIES

Section 1—Officers of the ASSOCIATION shall consist of the President, President-Elect, and Secretary-Treasurer. Any person holding office in the ASSOCIATION must be an active member.

Section 2—The President shall preside at all ASSOCIATION and Executive Council meetings, and appoint all committees as prescribed in Article IX. He shall call and make appropriate arrangements for the place and conduct of all meetings of the ASSOCIATION and Executive Council as provided in Article VII. He shall supervise the program planning for all ASSOCIATION meetings as provided in Section 3 below. He shall provide for an annual audit of the Secretary-Treasurer's accounts as provided in Article IX. He shall be authorized to sign checks in the absence of the Secretary-Treasurer.

Section 3—The President-Elect shall, during the absence of the President, perform all duties of the President, and, if the office of the President becomes vacant, the President-Elect shall succeed to the presidency for the unexpired term. The President-Elect shall succeed to the presidency at the normal expiration of the President's term of office as provided in Article IV. The President-Elect shall plan the ASSOCIATION program for its regular annual meeting, under the supervision of the President as stipulated in Section 2 above.

Section 4—The Secretary-Treasurer shall perform all duties usually incumbent upon these offices, edit and cause to be published the Proceedings of the annual meeting and other publications, in accordance with Article X, collect dues, pay ASSOCIATION bills on approval by the President, assume general charge of all monies belonging to the ASSOCIATION, render a financial account to members at the annual business meeting, and conduct mail voting procedures as authorized by the President. The Secretary-Treasurer shall be bonded by the ASSOCIATION to the sum of ten thousand dollars ($10,000) per annum. He shall receive a sum annually for clerical and other services, if funds permit, as determined by the Executive Council.

ARTICLE IV—ELECTION OF OFFICERS AND THE COUNCIL MEMBER-AT-LARGE

Section 1—A nominating committee consisting of the three immediate past presidents shall be instructed by the President to prepare a slate of at least two names for the office of President-Elect and Council Member-at-Large, the retiring President to serve as Chairman. If the Nominating Committee desires, it may submit only the name of the incumbent Secretary-Treasurer for re-election. Additional nominations may be made from the floor at the annual business meeting. A majority vote, with a quorum present, shall be required for election; if no candidate receives a majority on the first ballot, the two candidates receiving the highest number of votes shall then be voted upon. Elections shall be by secret ballot.

Section 2—Officers and the Council Members-at-Large shall be elected for one (1) year, extending from the close of the annual meeting at which they are elected to the close of the next annual meeting at which their successors are elected. If, for some unusual reason a quorum be not present at the election of officers—as provided in Article VIII, Section 1—the incumbent officers and Council Member-at-Large shall remain in their respective positions for the ensuing year.

Section 3—The President, President-Elect, and Council Member-at-Large shall not immediately succeed themselves in the same office, except as specified in Section 2 above. The Secretary-Treasurer may be reelected from year to year at the pleasure of the membership.

Section 4—Vacancies, except as provided in Article III, Section 3, shall be filled by the Executive Council pending the regular election.

ARTICLE V—WESTERN DIVISION

Section 1—The Western Division will be represented on the Executive Council only as its members might be elected to it (Executive Council) in the regular course of events as National College Physical Education Association members.

Section 2—The Western Division shall have one session at the Nattional College Physical Education Association meeting whenever it is held in any of the thirteen western states, in place of their regular annual meeting, and the President of the Western Division shall be responsible to the President-Elect of the National College Physical Education Association for this program just as any section chairman is responsible to him for his program.

Section 3—The purposes of the Western Division shall be consistent with the purposes of the National College Physical Education Association as stipulated in Article II of its constitution.

ARTICLE VI—SECTIONS

Section 1—The ASSOCIATION may establish sections within its organizational structure to promote the activities of professional interest groups. Examples are: basic instructional programs; intramural athletics; teacher education; intercollegiate athletics, research; history of sport; and others.

Section 2—The membership may authorize the establishment of any given section at a regular business meeting by a majority vote upon written application by twenty-five (25) current members stating the purpose and function of the proposed section and upon recommendation by the Executive Council—provided a quorum takes action as prescribed in Article VIII.

Section 3—Each section shall elect its own officers consisting of a Chairman, Chairman-Elect, and Secretary at the annual section meeting. A Nominating Committee consisting of three(3) section members shall be appointed by the Chairman at least three months preceding the annual section meeting at which the section officers will be elected. The Nominating Committee shall prepare a slate of two (2) names for each office. Additional nominations may be made from the floor. A majority vote shall be required for election. If there are more than two (2) candidates and no candidate receives a majority on the first ballot, the two candidates receiving the highest number of votes shall then be voted upon. Elections shall be by secret ballot. Any person holding office in the ASSOCIATION must be an active member.

Section 4—Section officers shall be elected for one year, extending from the close of the meeting at which they were elected to the close of the next annual meeting at which their successors are elected. Section officers shall not immediately succeed themselves in the same office.

Section 5—The Chairman shall preside at all section meetings which shall be open to the entire ASSOCIATION membership. He shall supervise the program planning for all section meetings held during the annual meetings of the ASSOCIATION He shall also be responsible for pursuing professional activities throughout the year which are pertinent to the interests of the section. He shall be responsible for the conduct of section activities in a manner consistent with the intent and stated provision of the ASSOCIATION's Constitution and By-Laws. By virtue of his office as Section Chairman, he shall serve as a member of the Executive Council of the ASSOCIATION.

Section 6—The Chairman-Elect, during the absence of the Chairman, shall perform all the duties of the Chairman, and, if the office of the Chairman becomes vacant, the Chairman-Elect shall succeed to the chairmanship for the unexpired term. The Chairman-Elect shall succeed to the Chairmanship at the normal expiration of the Chairman's term of office. The Chairman-Elect shall plan the section program for its regular annual meetings under the supervision of the Chairman as stipulated in Section 5 above.

Section 7 — The Secretary shall keep minutes of all business transactions at section meetings. These minutes shall be passed along to each succeeding Secretary, in order that the continuity of section activity may be maintained. He shall be responsible for forwarding all papers and reports given at section meetings to the Secretary-Treasurer of the ASSOCIATION for consideration for publication in the PROCEEDINGS.

Section 8 — The ASSOCIATION may abolish a given section at a regular business meeting by a two-thirds (2/3) majority vote provided a quorum takes action as prescribed in Article VIII.

ARTICLE VII—MEETINGS

Section 1 — The ASSOCIATION and its Executive Council shall each hold at least one annual meeting at the time and place designated by the Executive Council.

Section 2—Special meetings of the ASSOCIATION and/or the Executive Council may be called by the President upon authorization by the Executive Council.

ARTICLE VIII—QUORUM

Section 1—A quorum to conduct ASSOCIATION business at its regular annual meeting shall be thirty percent (30%) of the convention registered members at the times of the business meetings. A mail vote quorum shall consist of fifteen percent (15%) of the current membership. No mail vote shall be valid after thirty (30) days from the date upon which the question was mailed by the Secretary-Treasurer to the members for action.

Section 2—A quorum of the Executive Council shall consist of at least three-fifths (3/5) of the members, including the President, or the President-Elect duly authorized by the President to act for him.

ARTICLE IX—COMMITTEES

Section 1—Committees shall be designated as President's Committees, Continuing Committees, Standing Committees, and Joint Committees. Any person holding office in the ASSOCIATION must be an active member.

Section 2—President's Committees shall be appointed by the President and expire with his term of office.

Section 3—Continuing Committees shall be authorized by the membership at regular business meetings, or by mail vote. Continuing Committee members shall be appointed by the President and approved by the Executive Council. A Continuing Committee is one whose assignment extends beyond the term of office for which the President is elected, but which deals with a specific project or problem of terminal nature. Such committees shall continue until discharged by official action of the membership at a regular business meeting, or by mail vote.

Section 4—Standing Committees shall be authorized by the membership at a regular business meeting, or by mail vote. Standing Committee members shall be appointed by the President and approved by the Executive Council. A Standing Committee is one assigned a given task which, of necessity, extends indefinitely. Such committees shall follow the policy of rotating membership and number of members as determined by the Executive Council, with no person appointed for a period to exceed three (3) consecutive years. Standing Committees presently authorized by the ASSOCIATION are: Constitution; Finance; Foreign Relations; Historical Records; Membership; Necrology; Resolution; Nominations; Convention Program; Policies; Public Relations; Operating Codes; Research; and Legislative.

Section 5—Joint Committees shall be authorized by the Executive Council and appointed by the President. A Joint Committee is one that deals with a specific project or problem in cooperative relationships with one or more associations or organizations.

Section 6—Each Continuing Committee and Standing Committee shall prepare an operating code which is to be approved by the Executive Council.

Section 7—All committees shall report at each annual meeting as determined by the Executive Council.

ARTICLE X—PUBLICATIONS

Section 1—The official publication of the ASSOCIATION is the *PROCEEDINGS*, which contains a record of activities carried on throughout the year, culminating in the annual meeting.

Section 2—The Secretary-Treasurer shall be responsible for editing and publishing the *PROCEEDINGS* as soon as possible after each annual meeting, and for the distribution of free copies to all members in good standing.

Section 3—The Secretary-Treasurer shall arrange for the publication and distribution of such other materials as the Executive Council may direct.

ARTICLE XI—FINANCE

Section 1—Monies obtained by the ASSOCIATION shall be allocated to the: (a) operating budget; or (b) permanent fund.

Section 2—The operating budget shall contain those funds deemed necessary by the Executive Council to carry on the work of the ASSOCIATION throughout the fiscal year, including the annual meeting.

Section 3—The permanent fund represents those monies that accumulate from time to time in excess of the operating budget. The Secretary-Treasurer shall invest these sums upon recommendation by the Finance Committee (as defined in the following Section) and as approved by the Executive Council. The Executive Council may authorize the withdrawal of funds from the Reserve Account for use as the Executive Council sees fit.

Section 4—A Standing Committee, known as the Finance Committee and conducting its affairs under the direction of the Executive Council, shall: (a) prepare annually the operating budget; and (b) make recommendations to the Executive Council on the investment of surplus funds.

Section 5—The fiscal year shall extend from September 1st through August 31st.

Section 6—In the event of dissolution of the National College Physical Education Association for Men, all unencumbered funds will be forwarded to the American Association for Health, Physical Education, and Recreation, Washington, D.C.

NCPEAM Policies

All current policies formally adopted by the Association to govern its affairs are included in this section. For the purposes of the Association, a policy may be defined as an agreed course of action to be followed in conducting the affairs of the organization.

In many cases, the provisions of the Constitution and By-Laws of the Association are not definitive. These provisions are implemented into action through the medium of policies and procedures. These policies and procedures tend to give continuity and uniformity to Association activities over a considerable period of time, irrespective of the changes that occur continuously among its officers and members. It is also through the medium of policies and procedures that the Association gears itself to the fluctuations of the times.

ACHIEVING ASSOCIATION PURPOSES

1. Association Objectives

   The Association shall:

   a. Use every medium of influence to improve present programs of physical education in the schools at all levels to the end that the boys and girls and all citizens of the nation have adequate opportunity to develop desirable attitudes, knowledge, and skills in physical education.

   b. Support all efforts aimed at establishing desirable athletic practices at each educational level to the end that physical education can make its maximum contribution to the welfare of the participant.

   c. Engage in activities looking toward the promotion of research designed to improve the quality and scope of physical education programs through (a) research activities of the Association committees; (b) Association endorsed studies by selected graduate students in colleges and universities; (c) collaboration with other organizations conducting meetings and in the publications of the Association; and (d) serving as a clearing house for research in college physical education.

d. Use its influence to support the development of specific professional preparation programs for coaches and the establishment of certification standards for coaches.

e. Encourage the integration of men's and women's programs of physical education whenever possible.

f. Conduct a biennial poll of all active members to obtain ideas for new policies or revisions.

2. Coordinating with Other Agencies
The Association shall:

a. Cooperate with other education agencies to improve professional preparation programs in health, physical education, and recreation.

b. Cooperate with other educational agencies in promoting the objectives of health education, physical education, and recreation.

c. Call upon all school and college administrations to secure properly qualified professional personnel to teach, coach, and administer physical education and athletic programs.

d. Cooperate with other educational organizations in sponsoring and/or having official representation at conferences in the fields of health education, physical education, and recreation.

e. Coordinate whenever possible the work of committees and projects with similar committees from other professional organizations.

f. Cooperate with other professional societies in the formulation of education standards and in recommending them to colleges and universities for the development and control of programs of health education, physical education, and recreation.

3. Basic Instruction Program
The Association shall:

a. Support the position that the practice of substituting band or ROTC for the physical education program must be vigorously opposed.

b. Encourage colleges and universities throughout the country to abolish the practice of granting physical education credit for military service.

c. Encourage colleges and universities to include in the basic instruction program a depth of emphasis on the body of scientific knowledge, on the relationship of exercise to the biological development of the human organism, and on movement as a medium in the educational process for total development of the individual.

d. Encourage all colleges and universities to offer physical education instruction as a part of their academic curricula.

ADMINISTERING ASSOCIATION AFFAIRS

1. Membership
The Association shall:

a. Seek to retain new members to better acquaint them with the traditions and purposes of the organization, and seek ways for them to participate actively in the affairs of the Association.

b. Endeavor to maintain liaison with emeritus members by utilizing their experience and zeal through participating in assignments to Association affairs and programs.

c. The membership not previously paid will be billed for dues, one month after the Annual Meeting has concluded.

2. Annual Meeting

The Association shall:

a. Have as the primary purpose of the regular meetings of the Association to provide the largest number of members with opportunities to discuss the major areas of the college program of physical education. These meetings shall be planned so as to include wide participation among members.

b. Select the dates and location of the annual meeting so as to encourage maximal attendance by the members of the Association. To equalize, over a period of years, the distance traveled to meetings of the Association residing in the various sections of the country, the principle of periodic rotation among cities shall be given consideration in the selection of the site for the annual convention.

c. Consider site locations for the annual convention that place no restriction on Association members with reference to housing, attendance at meetings, or other factors tending to divide the membership.

d. Limit the length of the official convention to three days. This does not prevent any group from meeting before the convention, but group meetings shall not be included in the official program, nor shall any papers or summaries of pre-convention meetings be a part of the PROCEEDINGS.

e. Require papers submitted for presentation to be limited to the basic essentials of the topic. In no case shall papers exceed 2000 words, including committee reports. The editor shall have authority to make deletions or changes necessary to conform to his policy.

f. Require that only abstracts of prepared papers be presented at annual meetings, thus allowing more time for discussion.

g. Take no official action to assist non-Association special interest groups in scheduling informal meetings.

3. Committees

The Association shall:

a. Require each committee to submit its operating code to the Operating Code Committee, who will in turn request that the Constitution Committee check each code to see that it is in keeping with the constitution.

b. Rotate committee membership in order to involve as many members as possible.

c. Strive to seek committee representatives from institutions in all areas of the nation.

d. Provide a fund for use by the President in executing his duties. Normally, all of his expenses shall be borne by his institution; therefore, this fund is to serve only as an emergency fund.

4. Publications

The Association shall:

a. Disseminate deliberations of the official meetings through the published PROCEEDINGS and through reports covering such special projects as may be authorized by the Association.

b. Carefully edit all publications of the Association to make certain that they represent a high quality of scholarship and follow approved methods of conducting and reporting educational resesearch.

c. Not accept advertising or other extraneous material for publication in the literature of the Association.

d. Collaborate with the National Association for Physical Education of College Women in the publication of QUEST.

e. Display the following statement on the inside back cover of the PROCEEDINGS:

Non-profit organizations may secure reprints of PROCEEDINGS articles by paying cost-plus handling charges. Additionally, said organizations must secure the author's permission and then may request the privilege of reprinting and/or translating articles, giving appropriate credit to the author and the PROCEEDINGS.

However, profit agencies must pay the "going rate" for these privileges after receiving appropriate permission, with the revenue accruing to the National College Physical Education Association for Men. Profit making agencies shall be interpreted to include an author who receives royalties from a publication.

5. Projects

The Association shall:

a. Endorse only those studies which benefit the profession and the Association.

b. Place in the hands of the appropriate committee requests by students seeking endorsement of the Association for doctoral studies. Procedures to implement this policy will be included in the operating code of the committee.

c. Sponsor and conduct projects as approved by the Association. Such projects should involve little or no expense. They must be of a nature that their business can be readily transacted by mail, and they should have some beginning and ending.

d. Sponsor and operate a placement service for its members at the annual meeting.

6. Historical Records

The Association shall:

a. House National College Physical Education Association for Men historical documents in a designated college library.

b. Annually give two copies of the PROCEEDINGS to the library designated by the Association to house its historical materials.

c. Preserve its historical records by duplicating the original copies. Duplicate copies can then be distributed upon request from the library designated by the Association to house its documents.

7. Delimitation of Function

The Association shall:

a. Not serve as an accrediting agency to evaluate specific programs of physical education in individual institutions of higher education.

b. Not participate in activities concerning the relationship of a particular college to its employees in such matters as employment, promotion, tenure, dismissal, or academic freedom.

8. Maintenance of the Policy Statements

The Association shall:

a. Assign the Secretary-Treasurer to be responsible for maintenance of the policy book. He shall make its contents, or parts thereof, available to officers and members whenever the need arises.

b. Direct the Secretary-Treasurer to include new policies in the policy book or to revise or delete those previously established as approved at a regularly scheduled business meeting at the annual convention. Action on policies may be taken at any regular business meeting of the Association without the necessity of prior notice.

c. The Association's policies shall be printed in the PROCEEDINGS annually.

Emeritus Members 1971

Legend:

* Attended 1971 Convention

(1) Past President

(2) Past Secretary-Treasurer

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(1) ALLEY, LOUIS E., Ph.D. (1955)
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BAKER, JOHN A., Ed.D. (1967)
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BALCH, ROLAND E., M.Ed. (1964)
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BALEY, JAMES A., Ph.D. (1955)
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BALLOU, JR., RALPH B., Ph.D. (1962)
Middle Tennessee State University
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BARNEY, ROBERT K., Ph.D. (1970)
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Herbert H. Lehman College
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BERGERON, JR., PHIL C., Ed.D. (1970)
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BERGSRUD, O. B., P.E.D. (1971)
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BRYANT, THOMAS W., Ed.D. (1970)
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BRYNTESON, PAUL, D.P.E (1971)
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BUCCOLA, VICTOR A., M.A. (1971)
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BUCHER, CHARLES A., Ed.D. (1954)
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BUCKELLEW, WILLIAM, Ed.D. (1969)
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BUNDGAARD, AXEL C., Ph.D. (1961)
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Northfield, Minnesota

BUNDSCHUH, ERNEST L., Ph.D. (1967)
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BUNGE, WILLIAM J., M.Ed. (1964)
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*BURKE, ROGER K., Ph.D. (1958)
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BURKE, THOMAS R., M.Ed. (1969)
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BURNHAM, STANLEY, Ed.D. (1963)
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Austin, Texas

BURRUS, JR., HARRY C., Ed.D. (1948)
Parsons College
Fairfield, Iowa

BUSEY, DAVID G., M.S.Ed. (1964)
Lycoming College
Williamsport, Pennsylvania

BUSS, RONALD H., M.S. (1970)
Florissant Valley Community College
St. Louis, Missouri

BUTLER, KENNETH N., Ed.D. (1964)
University of South Florida
Tampa, Florida

BYRD, JOHN, Ed.D. (1970)
N.W. Missouri State College
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CAINE, JOHN E., Ed.D. (1971)
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Fullerton, California

CALDWELL, STRATTON F., Ph.D. (1960)
San Fernando Valley State College
Northridge, California

CALLAN, DON, Ph.D. (1971)
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CAMAIONE, DAVID N., Ph.D. (1967)
MacMurray College
Jacksonville, Illinois

CAMPBELL, DAN A., M.A. (1967)
California State College
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Oswego, New York

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California Lutheran College
Thousand Oaks, California

CAMPBELL, THOMAS A., M.Ed. (1970)
University of Akron
Akron, Ohio

CAMPNEY, HARRY K., Ph.D. (1968)
University of Massachusetts
Amherst, Massachusetts

CAREY, ROBERT A., P.E.D. (1968)
Eastern Illinois University
Charleston, Illinois

CARR, WILBUR L., Ph.D. (1963)
Furman University
Greenville, South Carolina

CARSON, WILLIAM B., M.Ed. (1964)
Youngstown State University
Youngstown, Ohio

CARTER, GAVIN H., Ph.D. (1967)
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Durham, New Hampshire

CARTER, J. E. LINDSAY, Ph.D. (1965)
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CHRISTENSEN, CHARLES, M.Ed. (1961)
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CHRISTENSON, IRVIN A., M.Ed. (1948)
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CHRISTINA, ROBERT W., Ph.D. (1970)
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CHROUSER, HARVEY C., M.A. (1954)
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DEGUTIS, ERNEST W., Ed.D. (1965)
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DEMPSEY, CEDRIC W., Ph.D. (1964)
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DENEVAN, JAMES P., M.S. (1970)
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DENNIS, JAMES M., B.A. (1970)
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DE SCHRIVER, RICHARD L., Ph.D. (1969)
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DINO, DONALD A., M.Ed. (1971)
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ELLISON, JR., LEO, M.S. (1963)
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